S P E C I F I C A T I O N S

f o r

Alterations & Additions

to Building for

F I R S T A M E R I C A N B A N K A N D T R U S T C O M P A N Y

Athens, Georgia

Comm. No. 7057 March 1, 1972

Heery and Heery - Architects & Engineers

701 C. & S. Bank Building

Athens, Georgia

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F I R S T A M E R I C A N B A N K A N D

T R U S T C O M P A N Y

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INVITATION FOR BIDS
Section A

Alterations & Additions to Building for
FIRST AMERICAN BANK AND TRUST COMPANY
Athens, Georgia

Heery and Heery, Architects and Engineers

1. Sealed bids for the construction of the above project will be received in the office of the Architect, 701 C. & S. Bank Bldg., Athens, Ga. until 3:00 P.M., E.S.T. April 18, 1972 and then publicly opened.

2. In general the existing building to be altered is a three story and basement structure, approximately 75 feet by 105 feet, of masonry bearing wall construction with wood framed floors and roof. The addition consists of a two-level parking structure of reinforced concrete approximately 75 feet by 180 feet.

3. Bids will be based on a single lump contract for all work exclusive of bank equipment which will be purchased under a separate contract.

4. Contract documents may be examined on and after March 27, 1972 at the offices of the Architect, 701 C. & S. Bank Building, Athens, Georgia.

5. Contract documents may be obtained at the office of the Architect by depositing a check in the amount of $50.00 per set, payable to the Architect. Deposits for up to two sets from General Contractors submitting a bid will be fully refundable upon return of the documents in good condition within 10 days after the opening of bids.

6. Sub-contract bidders, material suppliers and others who wish to obtain bidding documents, including General Contractors wishing to obtain more than two sets, may obtain them in the same manner as described above, except that in refunding deposits the Architect will deduct the cost of reproduction of the drawings and specifications.

7. Contract Documents will be on file and may be examined on and after March 27, 1972 at the office of the Architect and at the Atlanta plan rooms of the Atlanta Builders Exchange and the F. W. Dodge Corporation.

8. Bid security in the form of a Bid Bond or certified check made payable to First American Bank and Trust Company, in an amount equal to 5% of the Base Bid will be required. No Bidder may withdraw his bid within 30 days after the opening of bids.

9. Guaranty Bonds in the form of a Performance Bond and a Labor and Materials Payment Bond will be required.

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INSTRUCTIONS TO BIDDERS
Section B

1. BID FORM
Attention is directed to the fact that these Specifications include a copy of the Bid Form. This is for the information and convenience of Bidders and is not to be detached from the specifications, or filled out or executed. Separate duplicate copies of the Bid Form are to be submitted by the Bidder as set forth below.

2. PREPARATION OF BID
a. Bids shall be submitted in duplicate on Bid Forms which will be furnished in triplicate by the Architect.
b. Spaces are provided in the Bid Form for Base Bid and alternate bids. All such spaces shall be filled in on typewriter or in ink by the Bidder. Where both written words and numerical figures are given, the written words will apply in the event of conflict.

3. SUBMISSION OF BIDS
a. Bids will be received at the time and place set forth in the Invitation for Bids.
b. Envelopes containing bids shall be sealed and addressed as follows:

Heery and Heery
Architects and Engineers
701 C. & S. Bank Bldg.
Athens, Ga.

Mark in lower left hand corner "Bid for First American Bank and Trust Co."

4. EXAMINATION OF SITE, DOCUMENTS, ETC.
Each Bidder shall visit the site of the proposed work and fully acquaint himself with conditions as they exist so that he may fully understand the facilities, difficulties and restrictions attending the execution of the work under the Contract. Bidders shall also thoroughly examine and be familiar with the drawings and the specifications. The failure or omission of any Bidder to receive or examine any form, instrument or document or to visit the site and acquaint himself with conditions there existing shall in no way relieve the Bidder from any obligation with respect to his bid.

5. INTERPRETATION OF DOCUMENTS
No oral interpretations will be made to any Bidder as to the meaning of the drawings and specifications. Every request for such interpretation shall be made in writing and addressed and forwarded to the Architect. No inquiry received within 5 days of the date fixed for opening of bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the Contract Documents which, if issued, will be sent as promptly as is practicable to all persons to whom the Contract Documents have been issued. All such Addenda shall become part of the Contract Documents.

6. WITHDRAWAL AND MODIFICATION OF BIDS
a. Bids may be withdrawn on written or telegraphic request received from Bidders prior to the time fixed for opening.
b. Telegraphic bids will not be considered, but modifications by telegraph or in writing will be considered if received prior to the hour set for opening.

7. AWARD OF CONTRACT
a. The Contract will be awarded to the lowest responsible Bidder on the basis of low bid and accepted alternates.

8. REJECTION OF BIDS
The Owner reserves the right to reject any or all bids, when such rejection is in the interest of the Owner.

9. BONDS
Bid security in the type and amount stated in the Invitation for Bids shall accompany the bid. The bid security shall be retained by the Owner if the Bidder fails to execute the Contract, or fails to provide satisfactory Performance and Payment Bonds as required, within ten days after notice of award is mailed to the Bidder.

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BID FORM
Section C

To: First American Bank and Trust Company
Athens, Georgia

Dated _____

Gentlemen:

The Undersigned, having visited the site of proposed construction, and having familiarized himself with all conditions affecting the cost of the work and with all requirements of the Contract Documents entitled "ALTERATIONS & ADDITION TO BUILDING FOR FIRST AMERICAN BANK AND TRUST COMPANY, Athens, Georgia" dated March 1, 1972 and prepared by Heery and Heery, Architects and Engineers, hereby proposes to furnish all things as required by said Documents, including all Addenda thereto, for the construction of the entire work for the following amount:

BASE BID

_____

_____ Dollars ($_____).

ALTERNATE BID NO. 1. Amount to be deducted for omitting elevator. (If this alternate is accepted, elevator hatchway, pit and penthouse will be constructed as shown for future installation of elevator).
Deduct the sum of _____

_____ Dollars ($_____).

TIME OF COMPLETION

If awarded this Contract, the Undersigned will complete the work within _____ calendar days from the date of the notice to proceed. (Note: Bidder shall insert time of completion.)

ADDENDUM RECEIPT

Receipt of the following Addenda to the Contract Documents is acknowledged:
(Fill in space below, continue as required.)
Addendum No._____ Dated_____
Addendum No._____ Dated_____
Addendum No._____ Dated_____

BID ACCEPTANCE

If written notice of the acceptance of this Bid is mailed, or delivered to the Undersigned within 30 days after the date for opening of Bids or any time thereafter before this bid is withdrawn, the Undersigned will, within 10 days after the date of such mailing or delivery of notice, execute and deliver A.I.A. Contract Form. No. A-101, and furnish Performance and Payment Bond, in accordance with the specifications and Bid as accepted.

The Undersigned hereby designates as his office to which such notice of acceptance may be mailed or delivered:

(Signed) Name of Bidder:_____

Bidder is: Individual ( ), Partnership ( ), Corporation ( ). (Check one, as case may be.)

Residence of Bidder (if individual)_____

_____.

If Bidder is a partnership, fill in the following blanks:
Name of Partners:

_____ _____

_____ _____

If Bidder is a Corporation, fill in the following blanks:

Organized under the laws of the State of_____

Name and Address of the President _____

_____

Name and Address of Treasurer_____

_____

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FORM OF AGREEMENT
Section D

The form of agreement for this contract will be A.I.A. Standard Form No. A101, "Owner-Contractor Agreement Form-Stipulated Sum", current edition, September 1967.

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FORM OF BOND
Section E

The form of guaranty bond for this contract will be A.I.A. Standard Form. No. A311, "Performance Bond and Labor and Material Payment Bond", current edition, February 1970.

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GENERAL CONDITIONS
Section F

GENERAL CONDITIONS:

1. The "General Conditions of the Contract for Construction", A.I.A. Standard Form No. A201, current edition, April 1970, are hereby made a part of these specifications to the same extent as if bound herein.

SUPPLEMENTARY CONDITIONS

2. The following Supplementary Conditions, contain modifications to the A.I.A. General Conditions in the form of additions, deletions and substitutions. Where any part of the A.I.A. General Conditions is so modified by the Supplementary Conditions, the unaltered provisions shall remain in effect.

ARTICLE 1. CONTRACT DOCUMENTS

a. Par. 1.2 Execution, Correlation, Intent and Interpretations. Add the following to sub-paragraph 1.2.3:

"The following shall constitute the order of precedence in the event that there is a conflict between the Contract Documents:

Agreement
General Conditions
Supplementary Conditions
Addenda
Specifications
Drawings

Large scale details on drawings shall take precedence over scale measurements. Where duplications are encountered in the specifications, the most expensive material or method of construction shall take precedence."

b. Par. 1.3 Copies Furnished and Ownership. Modify sub-paragraph 1.3.1 as follows:

"A total of 12 copies of the Contract Documents will be furnished, free of charge. Additional copies of the Contract Documents may be obtained by the Contractor at his expense at the cost of reproduction."

ARTICLE 8. TIME

a. Par. 8.1 Definitions. Modify sub-paragraph 8.1.4 to read as follows:

"8.1.4 The term day shall mean a calendar day of 24 hours commencing at 12:00 midnight. The term working day shall mean any calendar day except Saturdays, Sundays and legal holidays observed at the site of the Project."

ARTICLE 11. INSURANCE

a. The following shall take precedence over any provisions to the contrary under Article 11.

"Below is listed the insurance coverage which must be procured by the Contractor at his own expense:

1. Owners' Protective Liability Insurance-
Personal injury, including death-limits of $100,000 for each person and $300,000 for each accident.
Property damage-limits of $50,000 for each accident and $100,000 for the aggregate of operations.

2. Contractor's Protective Liability Insurance-
Personal injury including death-limits of $100,000 for each person and $300,000 for each accident.
Property damage-limits of $50,000 for each accident and $100,000 for the aggregate of operations.

2a. Contractor's Public Liability Insurance-
Personal injury including death-limits of $100,000 for each person and $300,000 for each accident.
Property damage-limits of $50,000 for each accident and $100,000 for the aggregate of operations.

3. Builder's Risk Insurance-payable to the Contractor and Owner, as their interests may appear, upon the entire structure and upon all materials in or adjacent thereto which are to be made a part of the insured structure to 100% of the insurable value thereof covering fire, extended coverage, vandalism and malicious mischief.

4. Workmen's Compensation Insurance-as required by applicable Federal and State laws and covering Contractor and all Sub-contractors."

ARTICLE 12. CHANGES IN THE WORK

a. Par. 12.1 Change Orders. Add the following to sub-paragraph 12.1.3:

".4 For extra work performed, the allowance for overhead and profit combined, included in the total cost to the Owner, shall be based on the following schedule:

a. To the Contractor for work which he performs with his own forces, not to exceed 20% of his net additional cost.

b. To a Sub-contractor for work which he performs with his own forces, not to exceed 20% of his net additional cost.

c. To the Contractor for work performed by his Sub-contractor, not to exceed 7 1/2% of the amount due the Sub-contractor."

END OF SECTION

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PROJECT SCOPE
Division 1 * Section 1A

DESCRIPTION:

1. Work under this Contract shall consist of the complete restoration, alteration and renovation of Owners building (Old U.S. Post Office) together with new construction all as shown on the accompanying drawings and as specified herein.

SEPARATE CONTRACT:

2. The Owner will award a separate contract for furnishing and installing the following bank equipment:

Vault doors
Steel Vault lining
Vault ventilators
Safe deposit boxes and lockers
Night depository
Drive-in tellers window
Remote transaction system
Alarm system
Security photographic system
Financial furniture

3. Counter tops and fronts of teller cages adjacent to financial furniture units are a part of this Contract.

CO-ORDINATION:

4. The General Contractor shall co-ordinate his work under this Contract with the work to be performed by the Bank Equipment Contractor.

SHORING AND BRACING:

5. Shoring, bracing or otherwise strengthening any portions of the existing structure required by the installation of vault doors or other bank equipment will be done by and at the expense of the Bank Equipment Contractor. All other shoring and bracing required shall be done by the General Contractor.

SCHEDULING WORK:

6. The General Contractor shall, as soon as practicable after signing the Contract, furnish to the Owner a schedule of critical dates on which various items of bank equipment must be delivered, installed and completed by the Bank Equipment Contractor in order to avoid delays to the General Contractor in the performance of his work.

JOB CONDITIONS:

7. The General Contractor shall be responsible for carefully inspecting the existing structure and premises and shall take into account all conditions which will affect the work to be done under this Contract.

END OF SECTION

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DEMOLITION
Division 2 * Section 2A

DESCRIPTION:

1. This Section of the Specifications covers the removal of portions of the existing building and site work on the property to provide for the additions to and modification of the building.

2. Demolish all portions of the existing building indicated to be removed by notes on drawings and by broken lines on the drawings and elsewhere as necessary to accomodate the new work shown. Cut new openings and fill in existing openings where so indicated.

REUSING EXISTING MATERIALS:

3. Materials removed from the existing building, if suitable, shall be used in the new work. Face brick, terra cotta, and stone trim to be removed shall be cleaned and stored for incorporation into new work where required. Iron railings shall be carefully removed and modified as required for reuse.

REMOVAL:

4. Materials and equipment not suitable for reuse in the work and all debris resulting from demolition shall be removed from the premises and disposed of by the Contractor.

PROTECTION OF ADJACENT WORK:

5. Material and equipment that is to remain in place shall be carefully protected from soiling and damage during removal operations. Avoid hazards and nuisance to adjoining property owners and to the public.

SHORING AND BRACING:

6. Before removing portions of the work involving structural support or lateral bracing, adequate temporary shoring, bracing and other supporting structures shall be provided and maintained during the removal and reconstruction operations. Temporary supports shall be of a type suitable to maintain the stability of the structure. Where there is any doubt as to the removal

of any structural element, the Contractor shall employ and pay for the services of a consulting structural engineer to examine and advise regarding the removal and temporary support.

UTILITIES:

7. All piping including water, gas, drain, and sewer lines, gas meter, and all wiring including electric wiring and telephone wiring that is to be abandoned and not required, shall be removed and capped.

8. All existing piping, including sprinkler piping, and wiring located in the way of alterations shown, shall be relocated to avoid conflict or exposure.

SIDEWALKS AND CURBS:

9. Obtain approval from City of Athens Public Works Department for cutting, removing and replacing sidewalks and curbs. Do all cutting and removal in accordance with requirements of the City of Athens.

EXISTING HEATING SYSTEM:

10. All boilers, piping, valves, radiators and other portions of the existing steam heating system shall be removed from the building and disposed of by the Contractor. Suitable consideration shall be given of any salvage resulting therefrom.

END OF SECTION

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EXCAVATION, FILLING AND GRADING
Division 2 * Section 2B

DESCRIPTION:

1. Include all clearing, excavating and filling necessary to complete work shown on drawings and specified herein.

2. Excavate for work shown on drawings or specified in whatever material encountered. No extra will be paid for removal of rock or other hard material encountered.

3. Remove from site and dispose of excavated material unsuitable for fill or backfill, and all excess excavated material.

4. Provide and place any additional earth and other fill material needed to bring existing grades to new grades indicated or specified.

SUB-SURFACE SOIL DATA:

5. Sub-surface data and test boring results indicated on drawings are taken from drawings for the original building and are for the general information of bidders. The Architect will not assume responsibility for sub-soil conditions at locations of test borings or elsewhere.

CLEARING:

6. Remove complete trees, shrubs and stumps from area to be covered with buildings and driveway except where noted to remain. Remove old pavement in areas to be planted to lawn.

7. Box and protect all trees and shrubs to remain; maintain boxing until finished grading is complete.

EARTH EXCAVATION:

8. Remove all obstructions within ground area to be occupied by new building construction and for a distance of 2 feet beyond perimeter of new building.

9. Existing pipe, drainage and utility lines occuring below grade in area of new building shall be cut off and capped if not to be used, and shall be relocated outside the building area if they are to continue in use.

10. Excavate to elevations and dimensions indicated, plus sufficient space to erect forms and for inspection of founda-

tions. Excavation for footing trenches may be cut to accurate sizes and side forms omitted, if concrete is poured in clean-cut trenches without cave-ins.

11. If suitable bearing for foundations is not encountered at the depth indicated on drawings, the Contractor shall immediately notify the Architect and shall not proceed until instructions are given and measurements for purpose of establishing additional volumes of excavation and foundation are made.

ROCK EXCAVATION:

12. Rock shall, where practicable, be excavated by drilling and jack hammer. Where explosives are used, work shall be done by experienced powderman using small charges, and in strict accordance with all regulations governing this work.

13. Every precaution shall be taken to avoid damage to property. Any damage caused by use of explosives shall be corrected at Contractor's expense.

PRECAUTIONS:

14. Protect bottom of excavation from frost. Do not place foundations, footings or slabs on frozen ground. Shore and brace excavations, protect all slopes and earth banks and provide sheet piling if necessary to prevent cave-in. Remove shoring and piling before backfilling is completed, but not until permanent supports are in place.

15. Contractor shall control the grading around buildings so that ground is pitched to prevent water from running into the excavated area or damaging other structures. He shall furnish all pumping required to keep excavated spaces clear of water during construction. Water shall not be conducted onto adjacent property.

16. Placing of footings and foundations on earth fill will not be permitted. Fill excess cuts under footings and foundations with concrete and fill any excess cut under slabs with tamped gravel.

FILLING AND GRADING:

17. Do all excavating, filling, backfilling and rough grading necessary to bring area outside of building to following levels:

a. For paving, ramps, walks and other surfaced areas - to underside of respective surfacing.

b. For lawns and other planted areas - to 3 inches below finished grades. (Planting of lawns and shrubbery will be done by the Owner and is not included in this Contract).

18. Grades not otherwise indicated shall be uniform levels or slopes between points where elevations are given or between such points and existing finished grades. Abrupt change in slopes shall be rounded.

19. Remove debris from excavations before backfilling; do not backfill against foundation walls until concrete and mortar has thoroughly cured.

20. Deposit fill and backfill in layers not exceeding 8 inches under slabs, pavements and other surfacing and 12 inches under other areas; compact each layer. Compact fill under slabs with pneumatic tampers after a light sprinkling with water.

END OF SECTION

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CONCRETE AND CEMENT FINISH
Division 3 * Section 3A

DESCRIPTION:

1. This Section of the Specifications describes requirements pertaining to concrete and cement finish work.

SHOP DRAWINGS:

2. For approval, prepare and submit shop drawings in accordance with requirements as set forth in General Conditions Section of these Specifications. Prepare shop drawings in accordance with applicable requirements for Manual ACI (315-1965). Submit shop drawings for following work:

a. Reinforcing steel

b. Removable pan forms

3. Show complete elevations of reinforced concrete walls.

GENERAL:

4. The work specified in this Section includes all items in connection with the mixing, placing, curing, and inspection of cast-in-place concrete.

5. Ground preparation: Excavation of footings and preparation of ground for slabs on grade are specified in the Excavation, Filling and Grading Section of these Specifications.

6. Inserts, pipe sleeves, and other embedded items for mechanical and electrical work are specified in Mechanical and Electrical Divisions.

REFERENCED PUBLICATIONS:

7. The following publications as currently published by American Concrete Institute are hereby made a part of this Specification to the extent indicated:

a. ACI (315-1965), Manual of Standard Practice for Detailing Reinforced Concrete Structures, in its entirety.

b. ACI (318-1963), Building Code Requirements for Reinforced Concrete, Parts II and III, as referenced in this Section.

MATERIALS:

8. Portland cement shall conform to ASTM C150 for Type I.

9. Reinforcement steel bars shall be deformed to conform to ASTM A305. Provide certificate of mill inspection and test for all reinforcing materials; reinforcing steel shall conform to ASTM and Grades as follows:

Designation:	ASTM A615-68
Grade:	60
Yield:	60,000

10. Reinforcement wire shall conform to ASTM A82.

11. Welded steel wire fabric shall conform to ASTM A185.

12. Form oil shall be approved type, non-staining mineral oil.

13. Water shall be potable, clean, free of oil, acid and injurious amounts of vegetable matter, alkalies, or other salts.

14. Fine and coarse aggregate shall conform to ASTM C33. Coarse aggregate shall be not larger than 1 1/4 inch, No. 4.

15. Air entraining admixture shall conform to ASTM C260-69.

16. Curing compound shall conform to ASTM C309, Type I, clear, and be a combination sealer and hardener in a compound which will not prevent the adherence of paint or resilient floor covering to slabs. Compound shall be equal to The Aquabar Company's "Duro-Seal," A.C. Horn's "Clear Seal," or Guardian Chemical Company's "Clear Bond."

17. Vapor Barrier: Polyethylene sheeting, 6 mil thickness conforming to Commercial Standard CS 238.

18. Bar bolsters and support chairs shall be stainless steel.

REMOVABLE PAN FORMS:

19. The following manufacturers are acceptable:

a. Gateway Erectors, Inc.
b. Grid Flat Slab Corporation
c. The Molded Fiber Glass Company
d. Jayhawk Fibre Form
e. Masonite Corporation
f. Southern GF Company
g. Ceco Corporation

20. Fiberglass, reinforced plastic forms, metal forms, or molded fiber forms may be used upon approval of the Architect. Provide rough board forms where shown, see Par. 72.

21. Forms shall be new, unless approved by Architect. Forms showing excessive use and abuse will be rejected. Forms containing any deformities that would permit loss of concrete will be rejected. Patching of holes is acceptable, subject to Architect's approval.

22. Provide adjustable steel shores to support pan system (similar to Ceco-Meyer steel shores). Provide wood centering, beam soffits and headers for bridging joinsts, stringers and similar members as required for complete and satisfactory form system. (Use of patented system requiring erection by patent holder is not intended.)

23. Fit sections together to avoid leakage of concrete. Head openings and ends. Keep tops of forms to proper level to allow required slab depths. Nail forms through flanges to wood supports.

24. Prepare shop drawings to ensure coordination with mechanical, electrical and other trades' work so that pan formwork will provide proper headers and openings to accommodate such work and, when necessary, to provide additional forms and reinforcing for such openings and headers.

FORMWORK:

25. Formwork shall conform to these Specifications and to ACI Standard Recommended Practice for Concrete Formwork (ACI 347-63). Contractor shall be responsible for the design and construction of all formwork.

26. Make joints leakproof, and arrange to conform to design pattern. Place forms in successive units for continuous surfaces. Fit to assure smooth completed surfaces, free from irregularities.

27. DO NOT OIL FORMS FOR CONCRETE SURFACES THAT WILL RECEIVE ANY TYPE OF APPLIED FINISH. Such forms shall be wetted immediately prior to placing of concrete.

REINFORCING STEEL AND ACCESSORIES:

28. Reinforcing steel and accessories shall be detailed, fabricated, and tagged in compliance with ACI (315-1965).

29. Placing of reinforcing steel shall be in accordance with approved shop drawings and Chapter 8 in Part III of ACI (318-1963).

CLASS AND STRENGTH OF CONCRETE:

30. Concrete shall be working stress class and shall have minimum compressive strength at 28 days of 4000 psi.

CONCRETE QUALITY:

31. Concrete mix designs: A mix design for each slump to be used in each strength of concrete specified, applicable to the actual ingredients to be used, shall be prepared at the Contractor's expense in accordance with Method 2 in Section 502, Part III of ACI (318-1963), and shall be submitted to the Architect for approval.

32. Minimum cement content: A minimum of $6\frac{1}{2}$ bags per cubic yard of concrete shall be used.

ALLOWABLE SLUMPS:

33. The maximum allowable slump as determined by ASTM C143 shall be 3 inches for slabs and 5 inches for all other parts of the concrete work.

ADMIX:

34. Air entraining admixture shall be used to provide 3 - 6% air content by volume.

MIXING AND PLACING:

35. Mixing and placing shall be in accordance with Chapter 6 in Part III of ACI (318-1963). Any proposed change or a material listed on a mix design shall be approved by the Architect before this change is made in batching concrete.

36. Construction joints shall be in accordance with Section 704 in Part III of ACI (318-1963) and as shown on drawings.

LABORATORY TESTING AND OTHER INSPECTION:

37. Molding, initial curing, and delivering to the Architect-selected testing laboratory all test specimens required, in accordance with requirements of ASTM C31 and C172, shall be done by the Contractor at no cost to the Buyer.

38. During the progress of the work, each time the Architect so instructs, a slump test and a set of test cylinders, comprising a single test, shall be made. Three (3) test cylinders shall be taken from each day's pour or for every 50 cubic yards, whichever is less.

39. Testing of test specimens: One compressive strength concrete specimen shall be tested at 7 days and other specimens shall be tested at 28 days, in accordance with ASTM C39.

40. Reporting of test results: Each time test specimens are broken, reports shall be made and four (4) copies shall be submitted to the Architect by the laboratory.

41. Additional laboratory inspection: The laboratory shall also test concrete ingredients, make inspections of the ready-mix plant, and perform other services, when these services are considered by the Architect to be in the best interest of the Owner.

42. Paying for inspection: The expense of all laboratory inspection shall be paid by the Contractor. Notify Architect prior to need for tests in order to allow time for approval of laboratory.

GROUTING STRUCTURAL STEEL:

43. After structural steel bearing plates have been properly located and aligned, grout plates solidly with grout worked under steel to completely fill space.

Execute mixing and placing of grout in strict accordance with manufacturer's directions.

44. Grout shall be non-shrinking type, premixed with all required ingredients included and ready to have only water added at site; Embeco Pre-mixed Grout by Master Builders, or Ferrolith D.S. Pre-mixed Grout by Sonneborn Building Products, Inc., or Vibrofoil Ready-Mixed Grout by A. C. Horn (Grace).

PLACING FLOOR SLABS ON GRADE:

45. Vapor barrier under interior building floor slabs on grade, with a minimum of 6 inches of lap at joints, shall provide an unbroken vapor barrier between earth and the concrete, with all punctures fully sealed.

46. Control joints at locations shown on drawings shall be formed in accordance with drawing details.

47. Expansion joints at locations shown on drawings shall contain specified filler and sealer as detailed on drawings.

48. Positioning wire mesh shall be done in a manner that will allow lifting off of the ground to a position immediately below the control joint slot or 1/4 of the depth of the slab during the placing of the concrete.

49. Protection of surface to receive joint sealant: Concrete surfaces to receive joint sealant shall be, with positive means, kept free of any substance which might cause the adhesion of the sealant to be weakened.

50. Level of floor tolerance: The surface shall show no deviation more than 1/8 inch in 10 feet when tested longitudinally with a 10 foot straight edge.

CORRECTION OF DEFECTIVE WORK:

51. Minor surface defects, such as honeycomb less than 3/4 of an inch deep, shall be patched immediately after removal of forms, subject to the approval of the Architect.

52. Unlevel floor surfaces: Any surface which does not comply with the level of floor tolerance specified in this Section shall be corrected in accordance with instruction from the Architect.

53. Correction of all work shall be as required by the General Conditions Section.

FINISHING OF INTERIOR SLABS:

54. After concrete has been placed, struck off, consolidated, and leveled, concrete shall not be worked further until ready for floating. Start floating when water sheen has disappeared, and/or when mix has stiffened sufficiently to permit proper operation of a power-driven float. Surface shall then be consolidated with power-driven floats of impact type. Hand-floating with wood or cork-faced floats shall be used in locations inaccessible to power-driven machine. At this stage, check trueness of surface with 10-foot straight edge applied at not less than two different angles. All high spots shall be cut down, and all low spots filled during this procedure to produce planes checking ture under straight edge in any direction. Then, refloat slab immediately to a uniform, smooth, granular texture.

55. As soon as surface becomes workable, steel trowel to smooth, hard, impervious, polished finish. Machine troweling is acceptable for preliminary troweling; also for final troweling of cement finished floors and areas that are to receive floor coverings. For areas not to be covered, final troweling shall be by hand only.

FINISHING OF EXTERIOR SLABS:

56. Provide broom finish to the following exterior wearing surfaces:

a. Steps and Ramps

b. Traffic Surface

c. Parking deck slab on grade

57. Execute finishing by giving previously floated and machine-troweled surfaces a lightly transverse-scored texture by drawing a broom across surface. Finishing shall follow immediately after troweling.

58. Mark off surfaces in patterns as designated, or as directed. Execute marking with rounded finishing tool to provide smooth, straight lines.

FINISHING OF NON-EXPOSED SURFACES:

59. Surfaces not exposed to view shall have an as-cast

finish with the holes and defects patched and fins exceeding 1/4" in height removed.

FINISHING OF EXPOSED SURFACES:

60. Surfaces exposed to view including columns, walls, pan slab and beam soffits and beam sides shall be patched and rubbed to provide the entire area with a smooth, even texture ready for an applied finish. Surfaces to receive plaster shall be roughened.

CONCRETE WORK WHICH WILL BE PROTECTED BY LIQUID MEMBRANE APPLICATION:

61. Finish of structural slab.

a. To be free of cracks, voids, protrusions and depressions. Only wood float, hair broom or equivalent finish will be approved.

b. A sample of concrete finish shall be made at job site in a 3 foot square mold prior to pouring the structural slab. This sample is to be approved by the General Contractor, Waterproofing Contractor, Architect and manufacturer of liquid membrane.

c. The sample mold shall remain at the job site for reference during the entire pour of structural slab.

62. Treatment of concrete cold joints: Wherever a cold joint exists between two pours of concrete, an epoxy or epoxy-polysulfide bonding agent must be applied to the old concrete to strengthen the bond between the new and old concrete sections. Colma Bonding Compound as manufactured by Sika Chemical or Sonobond as manufactured by Sonneborn are acceptable.

63. Curing of structural slab:

a. Cure to specified strength by water spray and covering, only.

b. Curing agents may be used only if prior approval of curative has been authorized by the manufacturer of liquid membrane.

64. Protrusions through structural slab: Determine that all items to be imbedded in the structural slab, as required for the proper installation of the plumbing

or any other work, have been furnished by those trades as part of their contract so that they may be imbedded in structural slab.

65. Reglets: Furnish and install in concrete all reglets for flashings, etc; as shown and as may be required.

CONCRETE TRAFFIC SURFACE:

66. Traffic surface slab over parking deck structure shall be composed of Portland cement, sand, and admixture to attain a 28 day compressive strength of 2000 psi with a 3 - 6% air volume content. Slab shall be 2 inches thick and reinforced with one layer of 6 x 6 10/10 WWF.

CURING:

67. Not later than two hours after finishing, all concrete horizontal surfaces shall be sprayed with curing compound at the rate of 300 square feet per gallon.

68. Vertical surfaces shall be sprayed with curing compound at the rate of 500 square feet per gallon immediately after forms are removed and surfaces are patched and rubbed.

FORM REMOVAL:

69. Remove forms in a manner to prevent injury to the concrete. Forms shall not be removed until the expiration of the minimum time as follows:

Side forms on beams, girders, columns, non-retaining type walls (lifts of 15 feet and under): 36 hours.

Non-retaining type walls and columns (lifts over 15 feet): 72 hours (3 days).

Retaining type walls and columns, any lift height (wood forms one side, earth embankment forms opposite side): 120 hours (5 days).

Supporting forms for arches, beams, girders and slabs: 120 hours (5 days).

Maintain bracing, shoring and other supports in position for additional 216 hours (9 days) to support dead loads plus construction loads on beams, girders, slabs and retaining type walls.

CLEANING UP:

70. Immediately after completion of concrete operations, remove from site all debris resulting from work.

71. Immediately prior to final inspection, preliminary to acceptance, wash and clean all exterior concrete wearing surfaces and interior uncovered wearing surfaces.

ROUGH BOARD FORMS

72. Where form mark finish is called for on exposed concrete, construct forms of No. 2 common rough sawn boards of uniform thickness and random widths. Provide a vee shaped moulding spaced to form a vertical false joint where indicated. After removal of form, rough edges and excess fins on concrete shall remain undisturbed.

END OF SECTION

COMM. NO. 7057

UNIT MASONRY
Division 4 * Section 4A

SCOPE OF WORK:

1. Unit masonry of the several kinds specified or indicated necessary to complete the construction shown on the drawings, together with masonry flashings and other specified items of masonry incidental thereto.

2. Submit samples of face bricks for Architect's approval.

MASONRY MATERIALS:

3. Face brick for filling in and patching existing face brickwork on the building shall be face brick removed from the portions of the building shown to be demolished. All used brick shall be cleaned of all mortar and stains before being relaid.

4. Face brick for screen wall and other new face brick other than that specified above, shall match as closely as possible the existing brick, in size, color and texture.

5. Common brick for unexposed brickwork shall conform to ASTM Specification C62.

6. Concrete masonry units shall conform to the physical requirements (compressive strength, absorption and moisture content) of the current ASTM specifications C-90 for load-bearing units. The manufacturer will be required to certify that the units delivered to the construction will be manufactured, cured and dried in an acceptable and effective manner that will insure the units meeting the applicable ASTM specifications.

7. Terra cotta trim shall be existing T.C. removed from portions of structure to be demolished, cleaned and reinstalled.

MORTAR MATERIALS:

8. Portland Cement - A well known American brand conforming to ASTM specification C 150.

9. Masonry Cement - Type II in accord with Fed. Spec. SS-C-181.

10. Lime Paste - Made with pulverized quicklime or with hydrated lime conforming to ASTM specifications C 5 or C 141, respectively.

11. Sand for Mortars - Hard, durable, natural sand free from injurious amounts of saline, alkaline, organic, or other deleterious substances.

12. Grading - From "fine" to "coarse" within the following limits:

Sieve size	Percentage passing each sieve
No. 8	95-100
16	60-100
30	37-70
50	15-35
100	0-15

13. Water - Clean and free from deleterious amounts of acids, alkalies, or organic materials; of approved drinkable quality.

14. Mortar Color - Pure mineral pigments of a character which will not weaken the strength of the mortar; used in strict accordance with manufacturer's directions and in such proportions as will produce a mortar color satisfactory to the Architect.

MORTAR:

15. Design of Mixes - As determined by the Architect, following approval of the materials proposed for use; volume of aggregate in all mortars at least two times, but not more than three times, the volume of the cementious materials; bids based on the use of the mixes following.

16. For Hollow Units in Contact with Earth - 1 part Portland cement; 1/4 part lime paste; not more than 3 parts sand.

17. For Brick and Concrete Masonry Units Generally - 1 part Portland cement; 1 part lime paste; not more than 6 parts sand; or, 1 part masonry cement and not more than 3 parts sand.

18. Mortar for Face Brick Work - Same as the mortar used for setting common brick work but colored as directed by the Architect by addition of non-fading mineral pigment.

19. Terra Cotta setting Mortar - Same as mortar for setting brick and structural tile, but using non-staining quality cement.

20. T.C.-pointing Mortar - 1 part non-staining Portland cement to not more than 2 $\frac{1}{2}$ parts sand; sufficient lime paste added to make a very stiff mixture.

21. Method of Mixing Mortars - Materials proportioned by volume; Portland cement mortars made by mixing the cement and sand, adding lime paste, then adding sufficient water to obtain proper working consistency. Masonry cement mortar mixed in accordance with manufacturer's directions.

ANCHORS, TIES AND REINFORCEMENT:

22. Wall Anchors - For securing partitions to adjoining construction where bonding is impracticable shall be not less than $\frac{1}{4}$" x $1\frac{1}{4}$" galvanized metal bars with ends turned up 2". Anchors shall extend not less than 12" into partition and 8" into masonry wall, and shall be placed approximately 2'-0" o.c. in height.

23. Wall Ties - Brick veneer shall be tied to the backing by galvanized corrugated metal ties at least 7/8" wide and not lighter than No. 22 gauge, or other approved ties. At least one metal tie shall be used for each 2 square feet of veneer and ties shall be spaced not farther apart than 24" either vertically or horizontally.

MASONRY CONSTRUCTION:

24. Requirements Applying to All Types of Units - Water-tight construction provided in all exterior masonry. Except for concrete masonry, joints throughout the work completely filled with the specified mortar.

25. Condition of Beds and Units - Clean; all beds and units, except concrete units, properly wetted.

26. Protection of Uncompleted Work - Top thoroughly covered with watertight material while work thereon is not in progress.

27. Scaffolds - All face work laid up from scaffolds located on the facing side.

28. Mason's Iron Work and Masonry Flashing - Properly set as the masonry work progresses.

29. Workmanship - All work built true to line; level, square, and plumb. Exposed joints practically uniform in size. Masonry walls and adjoining masonry partitions properly bonded to each other by toothing courses. Brick and hollow block units thoroughly bonded together.

30. Weather Conditions - Exterior masonry shall not be laid in freezing temperature or under probability of freezing. If in doubt, provide cover protection where freezing of mortar might occur.

BRICKWORK:

31. Bond - Match bond of existing work for all face brickwork on existing building; all other brick laid in "common" or "running" bond used (except where other bond or pattern work is indicated), with a full-length header course at every sixth course.

32. Bed Joints - Mortar spread thick. Deep furrowing avoided. Finished joints uniformly (approximately) 1/2" wide.

33. Head Joints - Made with liberal application of mortar on surfaces of the unit to be placed and shoving the unit against the unit previously placed, causing mortar to ooze out at the top and sides of the joint. Contact surfaces of "closure" units and units previously placed given liberal application of mortar; closures "rocked" into place without disturbing the bond of adjacent units. Width of head joints same as required for bed joints.

34. Wall Joints - Made with liberal, continuous application of mortar on the contact surfaces of units in place and units to be placed, and shoving the unit against the work previously placed, causing mortar to ooze out the top and sides of the joint. Wall joint 1/2" (minimum); 3/4" (maximum).

35. Finish of Exposed Joints - On exterior, exposed joints tooled in manner providing a compacted, concave surface, the mortar being pressed tightly against adjacent masonry units on both sides of the joint. On interior, exposed joints tooled as indicated or directed.

36. Prohibited Practices in Workmanship - "Buttering" corners of units; throwing mortar scrapings into joints; "slushing"; deep or excessive "furrowing" of bed joints; shifting position of units placed by tapping or hammering.

CONCRETE MASONRY UNIT WORK:

37. Workmanship - All concrete masonry walls shall be true and plumb and built to the thickness and to the bond or pattern indicated on drawings. Where no bond or pattern is indicated the wall shall be laid in straight uniform courses with the units in the courses above regularly breaking joints with the courses below. All workmanship shall be of the highest grade.

38. Mortar Joints - Standard width of mortar joints for both horizontal and vertical joints shall be 3/8". Vertical joints shall be shoved tight. Face shell bedding shall be used with complete coverage of face shells. Furrowing will not be permitted.

39. Finish of Exposed Joints - Mortar joints shall be struck off flush with wall surface and when partially set shall be compressed and compacted with a rounded or V-shaped tool. To secure a horizontal line the tool employed shall be a minimum of 24" in length; the standard short brick tool is not acceptable.

CLEANING MASONRY:

40. Treatment of Surfaces - Masonry joints pointed or re-pointed where necessary; surfaces thoroughly brushed or scraped free of dirt, excess mortar or plaster, and other foreign materials; all discolorations and other objectionable surface defects thoroughly removed.

41. Acid Treatment - Where necessary to restore original color, surfaces of exterior masonry, and exposed interior masonry not required to be painted, washed with a suitable muriatic acid solution, and thoroughly rinsed.

42. Protection - Materials adjacent to masonry properly protected against staining and other injury during cleaning operations.

BRICK PAVEMENT:

43. Provide new brick pavement for floor of Loggia (Space No. 100) and for entrance walk as shown on drawings.

44. Brick for paving shall be hard burned, solid (not cored) clay or shale units of color and texture as selected by the Architect. Submit samples for approval.

45. Brick paving shall be laid to patterns shown, on a bed of mortar; tap brick down to proper level and leave all joints open temporarily. Adjust joints to avoid unnecessary cutting. Fill all joints with a cement grout composed of 1 part Portland cement to 3 parts sand; pour and sweep grout into joints and strike off even with top of brick. After grout has set for at least 72 hours, grind brick floor and walk with a terrazzo machine to an even and reasonably smooth surface. Protect adjacent surfaces from splashing while grinding is in progress. Upon completion wash floors clean.

END OF SECTION

COMM. No. 7057

MASONRY RESTORATION
Division 4 * Section 4B

DESCRIPTION:

1. This Section of the Specifications and related drawings describe requirements pertaining to the restoration of the masonry work of the existing building. From coping to grade on all exterior elevations the following shall be done:

a. Clean all terra-cotta.

b. Clean all brick and limestone.

c. Cut out and recaulk perimeter of all window and door openings.

d. Cut out and caulk all joints in terra-cotta.

e. Cut out and repoint all limestone joints.

f. Repair all spalls in limestone.

g. Repair all spalls in terra-cotta.

h. Apply liquid membrane to wash surfaces of cornice.

i. Apply coating to terra-cotta surfaces.

j. Random point brickwork.

k. Remove paint from terra-cotta surfaces.

l. After all repairs have been made, one coat of a transparent waterproofing will be applied to all masonry surfaces.

CLEANING:

2. Exterior masonry surfaces shall be cleaned by one of the following at the option of the Contractor:

a. By means of RC 3 masonry cleaner, as distributed by Minne-Jet, Inc., in accordance with the distributors printed instructions, or,

b. By means of the hydro-silica process, using water under extremely high pressure. In terra-cotta, a chemical detergent will be used. On limestone and brick surfaces, no chemical detergents will be used whatsoever, only high pressure water.

3. The cleaning shall be of the highest grade and the cleaned masonry shall have the original appearance.

COATED TERRA-COTTA:

4. Clean masonry surfaces by first burning the present coating with torches, then removing the cinder by means of a sandblast, using silica sand of suitable size and compressed air under moderate pressure.

WINDOW AND DOOR CAULKING:

5. Remove all old materials at the perimeter of windows and at the jambs and heads of doors. Deep openings between frames and masonry shall be packed with a compressible filler.

6. Recaulk with a mono-lasto-meric one part acrylic caulking compound placed with hand pressure guns, completely filling the caulking rabbets and coming out on both frame and masonry to a distance of approximately 3/8". Caulking surfaces shall be tooled to a neat, smooth finish.

TERRA-COTTA JOINTS:

7. Cut out all mortar joints to a depth of approximately 1/2". Hollow joints shall be cleaned out and back-packed with a compressible filler, to provide a stop approximately 1/2" back from the surface. Wherever the contours permit, the cutting shall be done with motor-driven abrasive saws to avoid spalling the edges of the stones.

8. Joints shall be cleaned out dry, and filled solidly, flush with the surfaces, with a mono-lasto-meric one part acrylic caulking compound, installed in accordance with the manufacturer's directions.

RANDOM POINTING:

9. Test mortar joints with hammer and chisel and cut out all weak, loose, broken or otherwise structurally defective mortar. Hollow joints shall be cleaned out to expose full depth of opening. Wash out all openings

and repoint solidly with non-shrinking mortar, flush with the brick surfaces. Openings deeper than 1/2" shall be repointed in two or more operations.

LIMESTONE POINTING:

10. Cut out all mortar joints to a depth of approximately 1/2". Hollow joints shall be cleaned out and back-packed with mortar to provide a stop 1/2" back from the surface. Wherever the contours permit, the cutting shall be done with motor-driven abrasive saws to avoid spalling the edges of the stones.

11. Wash out thoroughly to remove dust and dirt of cutting, and while surfaces are still damp, repoint solidly with non-shrinking mortar, flush with the stone surfaces. New joints shall be left under a lightly tooled finish.

LIMESTONE AND TERRA-COTTA REPAIR:

12. Where pieces are still available: The bond faces of the broken pieces of stone shall be thoroughly cleaned and allowed to stand until dry. The pieces shall then be assembled in their original position and glued with an epoxy adhesive.

13. Where pieces are not available: Cut back disintegrated stone areas to a sound, round surface. Wash down to remove cutting dust and let stand until dry. (For shallow patching, maximum depth 1/2" to 3/4"). Build out prepared areas to original lines with DUGAN'S PATCHER, installed in accordance with the manufacturer's directions.

14. For deeper patching: Fill in the prepared openings with stone chips to about 1/4" from the face, gluing the pieces with epoxy adhesive. Finish to original lines with DUGAN'S PATCHER installed in accordance with the manufacturer's directions.

WASH SURFACES OF CORNICE:

15. Shelf of cornice shall be given a coat of liquid rubber membrane starting 1/2" back from outer edge and extending up onto the parapet wall 4". Dry mill thickness shall be at least 50 and material shall be gray in color.

TRANSPARENT WATERPROOFING:

16. After all repairs have been made to the exterior surfaces of the building, one application of a 5%

silicone transparent waterproofing shall be applied to brick and limestone surfaces in such a way as to satisfy the porosity of the surface but not to leave a glaze on it.

COATING TERRA COTTA:

17. After cleaning and repointing terra cotta, surfaces shall be coated in order to achieve uniformity of color throughout.

18. Material for coating shall be a ready mixed coating such as Luminall Masonry Paint or Tremco Cemcol. Special color shall be mixed to match sample to be furnished by the Architect.

GUARANTEE:

19. Furnish the standard guarantee of the Building Waterproofers Association covering all work of this section for a period of five (5) years.

END OF SECTION

COMM. NO. 7057

MISCELLANEOUS AND ORNAMENTAL METAL
Division 5 * Section 5A

EXTENT OF WORK:

1. Include any and all miscellaneous and ornamental steel, iron and aluminum or other non-ferrous metal work required by or inferred from drawings and specifications and not specified elsewhere.

2. The following items are specified under other Sections:-

a. Aluminum entrances

b. Anchors, ties and reinforcement for masonry

SUBMITTALS:

3. The Contractor shall submit for approval shop drawings, catalog cuts or samples of the ornamental and miscellaneous metal items as required.

4. All ornamental and miscellaneous metal items shall comply with the approved submittals.

CONSTRUCTION AND WORKMANSHIP:

5. Contractor shall be responsible for working out all details necessary for proper installation of the work specified in this Section.

6. Do all cutting, drilling and fitting necessary. Provide connecting members to secure the work properly in place.

TROUGH DRAIN AND GRATING:

7. Cast iron, size 8", Type 646 with grating as manufactured by Flockhart Foundry Company or approved equal. Grating shall be $10\frac{1}{4}$ inches wide in removable sections 48 inches long. Furnish section with one end closed at each end of trough. One closed end section shall have spigot end connection to fit hub of 4-inch cast iron pipe.

LADDER:

8. Provide steel ladder for access to mechanical room above vault where shown on drawings. Re-use one of the existing steel ladders to be removed from lookout galleries of the existing building. Modify as necessary to fit in new location.

FLAGPOLE:

9. Flagpole shall be a continuous tapered aluminum pole, complete with all fittings; locate pole where shown on drawings. Pole shall be 50 feet high above grade, approximately 6 5/8 inch diameter at butt and tapered with entasis to a top diameter of approximately 2 7/8 inches. Pole shall have a smooth uninterrupted exterior surface throughout without visible joints or offsets.

10. Fit pole with a 20 oz. sheet copper ball of diameter recommended by manufacturer for this height pole. Properly treat copper surface and cover with gold leaf. Mount ball on 3/4 inch seamless brass tube.

11. Fit pole with bronze body ball bearing truck, revolving on a bronze spindle. Fit truck with two, 2 3/8 inch diameter bronze roller bushed sheaves and 3/8 inch diameter bronze pins.

12. Furnish two sets of No. 10 cotton braided halyards with bronze swivel snaps at each end for securing flag. Provide two 9 inch bronze cleats tapped to pole with two 5/16 inch bronze machine screws. Provide a collar and mouldings at base of pole similar to American Flagpole No. 1233.

13. Set pole in place in concrete foundation as shown. Follow manufacturer's setting instructions and drawings.

ORNAMENTAL EAGLE:

14. Furnish and install cast aluminum eagle ornament where shown on interior of building.

15. Eagle shall be made in accordance with Architect's detail to be furnished; by Andco Industries Corporation, P. O. Box 7366, Greensboro, N. C. 27407. (No substitutions).

16. Eagle shall be approximately 7 feet wide, 2 1/2 feet high, maximum depth 3 inches. Casting shall receive a duranodic architectural bronze gold finish.

17. Provide suitable attachments and methods for concealed mounting on wood surface.

METAL LETTERS:

18. On front elevation, provide cast aluminum letters, 10 inches high, to read "FIRST AMERICAN BANK AND TRUST CO." Letters shall be "Architectural" style 333 with prismatic face as manufactured by Andco Industries Corp., Greensboro, N. C.

19. Letters shall have a dark bronze duranodic finish. Letters shall be fastened to terra cotta band course with concealed fastenings. Submit details showing method of fastening for Architect's approval. Provide full size template to Contractor for proper spacing of letters.

20. In same size and style letters as specified in paragraph 18 above provide letters where shown, reading "DRIVE-IN ENTRANCE" and "EXIT ONLY".

TREE GRATES

21. Provide cast iron tree grates for large tree where shown on drawings. Grates shall be similar to Cat. No. R-8615 of Neenah Foundry Company but fabricated to special size as shown on drawings.

STEEL CHANNEL FRAMES

22. Steel channel frames at entrance vestibules shall be fabricated as shown on details with mitered and welded corners. Anchor to existing masonry and wood jambs as shown.

END OF SECTION

COMM. NO. 7057

ROUGH CARPENTRY
Division 6 * Section 6A

GENERAL:

1. The work included in this Section comprises all of the rough carpentry in accordance with the drawings and as specified herein.

2. Do all cutting, patching and alterations as required or inferred by the drawings.

MATERIALS:

3. All rough carpentry, framing lumber such as beams, sills, plates, joists, studs, and bucks shall be Number 1 Southern yellow pine.

WORKMANSHIP:

4. Joists, beams, and girders shall be set with their crowning edge upwards and, where bearing on masonry walls, shall be splayed not less than 3 inches in their depth, with bearings of not less than 4 inches. Each tier of joists bearing on walls shall be tied to masonry walls at intervals not exceeding 4 feet by metal anchors, furnished and installed by Contractor, not less than 1/4 inch by 1-1/4 inch cross section and at least 24 inches long securely spiked near the bottom of the joist and provided with split and upset or other approved means for building into masonry. Joists parallel to masonry walls shall be provided with similar anchors at intervals not exceeding 6 feet, engaging three joists.

5. Where studding forming bearing partitions or walls, occurs over sills, girders or plates, they shall extend down to these and be securely spiked to bearings. Joists carrying parallel bearing partitions shall be doubled under them. Bearing partitions at right angles to joists shall rest on doubled plates. Nonbearing partitions may rest on single plates, laid over sub-floors. All stud bearing partitions and walls shall have doubled caps and cross bridging of same material as studs, at intervals not exceeding 6 feet in height securely nailed with at least two nails at each end.

6. In general, studs shall be doubled at all corners and angles, and sides and heads of openings. Truss over all openings wider than 3 feet, and over all openings in bearing partitions.

7. Where framing out is necessary, both header and tail beams shall be supported with approved wrought iron joist hangers or stirrups furnished and installed by this Contractor. Where more than two joists frame into a header, both trimmers and headers shall be doubled in size.

BRIDGING:

8. Bridge all joists at intervals of not less than 8 feet with a double row of cross bridging. Material for bridging shall be of pine not less than 1-1/16" x 2-5/8" and shall be nailed with two 8d. nails at each bearing.

GROUNDS:

9. Permanent grounds shall be provided wherever required to afford proper nailing of all finished Carpentry for the securing of wood trim.

10. All grounds shall be dressed to sizes required on details, and shall be secured in position in a manner absolutely rigid, straight, level, even and plumb, so that the surfaces of the finished coat of plastering shall be flush with the face or edge of all grounds.

11. Grounds generally shall be 5/8" x 2" in size, where same are applied to block work, and 3/4" x 2" where applied to lath work. Grounds shall be in as many lines as required to set trim properly.

FURRING:

12. Wood furring shall consist of 3/4" x 2" pine or other soft wood, dressed to an even thickness, spaced 12" o. c.

13. Where wood furring is specified to be applied to masonry surfaces, a secure nailing shall be provided by drilling and plugging.

14. Where wood furring is to be secured to wood framing, it shall be firmly nailed at every bearing.

BUCKS:

15. Provide wood bucks for door frames in masonry walls. They shall be of the plain type, of materials and sizes as shown on drawings. Legs shall be dadoed into heads and heads pointed at both ends.

16. Bucks shall foot upon the floor or on top of concrete slab, as may be necessary. All bucks shall extend in one piece, the full height of the openings, and shall be provided with No. 16 gauge galvanized iron crimped anchors, 1-1/2" wide, at least to each jamb.

17. Bucks shall be accurately set, plumb, and true and properly stayed until built in.

CENTERS:

18. Build all centers for masonry arch as required.

ROUGH HARDWARE:

19. Contractor shall provide and apply all rough hardware required for the proper execution of all Rough Carpentry.

BACKER BOARDS FOR TELEPHONE PANELS:

20. Provide and install 3/4 in. thick, B-D, Group 3, Interior grade plywood backer boards located as directed, to receive telephone company's panel equipment. One 4 ft. x 8 ft. board is required in basement and one 4 ft. x 4 ft. board each for first, second and third floors.

END OF SECTION

COMM. NO. 7057

ARCHITECTURAL WOODWORK
Division 6 * Section 6B

GENERAL:

1. Scope - Furnish and deliver all architectural woodwork as shown and specified. "Architectural Woodwork" as used herein means all exterior and interior woodwork, plywood and hard plastics exposed to view in the finished building, except as specifically excluded in the following paragraph.

2. Work Specified Elsewhere - Unless exceptions are specifically called for herein under individual headings, the following are specified under other Sections of the specifications:-

Flooring (used as wall paneling)
Wood Doors
Furnishing and installation of hardware.
Erection, painting and finishing of architectural woodwork.

3. Quality Standards - The Quality Standards of the Architectural Woodwork Industry (AWI) shall apply and by reference are made a part of these specifications.

4. Competence - The Architect reserves the right to approve the woodwork manufacturer selected to furnish all of the woodwork. The approved woodwork manufacturer must have a reputation for doing satisfactory work on time and shall have sucessfully completed comparable work.

5. Shop Drawings - Shop drawings shall be furnished for all woodwork, except when shown full size on the architectural drawings, or for stock items referred to by manufacturer's catalogue number, and shall be drawn in related position with sections shown either full size or 3" scale.

6. Field Dimensions - The woodwork manufacturer is responsible for details and dimensions not controlled by job conditions, and shall show on his shop drawings all required field measurements beyond his control. The Contractor and the woodwork manufacturer shall co-operate to establish and maintain these field dimensions.

7. Job Assembled Work - The Contractor when installing items not shop assembled shall distribute to best overall advantage the defects allowed in the quality grade specified.

8. Delivery and Storage - The woodwork manufacturer and the Contractor shall jointly be responsible to make certain that items of woodwork are not delivered until the storage area and the building are sufficiently dry so that the woodwork will not be damaged by excessive changes in moisture content.

9. Allowable Deviations - Deviations from the quality grade, species and finish specified below will be allowed for individual items or components such as pulley stiles, exterior jambs, sash, closet shelving, semi-exposed case materials, handrails, treads and similar components only if so specified under the separate headings covering such items.

EXTERIOR WOODWORK:

10. Quality Grade - Material and workmanship of all exterior woodwork shall conform to the Custom grade requirements of the AWI Quality Standards.

11. Wood Species - All exterior wood shall be ponderosa pine or all heart redwood.

12. Plywood - All exterior plywood shall be fir or medium density over-lay.

INTERIOR WOODWORK FOR PAINT FINISH:

13. Scope - Interior woodwork other than that specified for transparent finish shall be made for paint finish.

14. Quality Grade - Material and workmanship of all interior woodwork for paint finish shall conform to the Custom grade requirements of the AWI Quality Standards.

15. Wood Species - All interior wood for paint finish shall be poplar or ponderosa pine.

16. Plywood - All plywood for paint finish shall be gum or ponderosa pine or particle board that will paint without pitting.

STANDING AND RUNNING TRIM:

17. Scope - This includes cut-to-length and lineal type wood trim of all kinds for both interior and exterior use; also interior door jambs and borrowed light jambs.

18. Quality Grade and Species - All exterior and interior standing and running trim shall conform to the quality grade and species called for herein under Exterior and Interior Woodwork. Quality grade is as defined in AWI Quality Standards, section 300.

CASEWORK (Tellers counter tops, fronts and gates):

19. Quality Grade and Species - All casework shall conform to the quality grade and species called for herein under Interior Woodwork. Quality grade is as defined in AWI Quality Standards, section 400.

20. Semi-Exposed Parts - Wood material used for semi-exposed parts, that is, parts fully concealed when opaque case doors are closed, shall be optional with the manufacturer.

21. Plastic Laminate Fronts and Counter Tops - The cores of high pressure laminate counter tops shall be of the thickness shown on the details, but not less than 3/4" thick. The face laminate shall be Parkwood 2074LX Russet Leather.

22. Gates - Solid core, 1-3/8" thick, plastic laminate on all exposed surfaces.

STAIR WORK:

23. Provide new mouldings, nosings, balusters, handrails, and other missing and/or damaged parts for the existing main stairway.

24. All finish stairway material shall match the existing work in all particulars.

TOILET ROOM COUNTERS

25. Lavatory counters and vanity shelf in Toilet Rooms shall be of similar construction to that specified under paragraph 21 above and shall have plastic laminate tops and edges; color and pattern shall be Parkwood 517 Bronze.

END OF SECTION

COMM. NO. 7057

FINISH CARPENTRY
Division 6 * Section 6C

GENERAL:

1. This Section covers all finish carpentry required or reasonably inferred by the drawings, including installation of architectural woodwork specified in Section 6B.

HANDLING AND PROTECTION:

2. All exterior and interior finished woodwork, when delivered at the site, shall immediately be placed under cover and be adequately protected from the weather. Kiln-dried material shall not be stored or erected in wet or damp portions of the building or in sections where plastering, terrazzo or similar work is to be executed until such work has been completed and become reasonably dry.

FINISHED CARPENTRY:

3. Interior frames, trim or other finish of any sort shall not be set until the plaster is on and dry, in the judgment of the Architect.

4. All work shall be fitted and scribed to plaster or other finished work in a careful manner, so as not to injure the surface in any way. All nailing shall be blindnailed wherever possible, but, where not possible the nailing shall be so located and driven as not to be visible in the finish.

EXTERIOR WOOD TRIM:

5. Exterior wood trim shall conform to sections and sizes indicated on scale and detail drawings and shall consist of materials and be prepared to receive finishes specified under painting.

STAIRS:

6. Replace all damaged and missing parts of main stairway; rework and restore to original condition.

DOOR FRAMES:

7. Exterior and interior door openings shall be fitted with frames as indicated on drawings, constructed in accordance with details, of kiln dried stock of grade, materials and dimensions as specified. These frames shall be fitted with stops, finished the full thickness of walls or partitions and arranged to receive trim or scribe mould on one or both sides in accordance with detail drawings. Frames shall be rigidly blocked, wedged and firmly secured to bucks or rough studding.

TRIM:

8. Patch, repair, replace and extend all existing trim, base, stools and other millwork as required by alterations as shown on drawings.

SPLICING:

9. Splicing in base and other running trim will be permitted in lengths over 15 feet only and must be beveled splices.

HARDWARE:

10. This Contractor shall apply all finished hardware and shall obtain from the supplier of the finished hardware complete information as to type and sizes and make all allowances necessary to properly receive the hardware to be used.

The finishing hardware to be applied under this Section will be delivered to the building. The Contractor will be required to receipt for same and shall assume full responsibility for all hardware so received until application and acceptance of the work.

END OF SECTION

COMM. NO. 7057

LIQUID MEMBRANE WATERPROOFING
Division 7 * Section 7A

GENERAL:

1. The requirements of the "General Conditions" and "Supplementary Conditions" apply to this section.

WORK INCLUDED:

2. The contractor shall provide all items, articles, materials or methods listed, mentioned or scheduled on the drawings or herein; including all labor, materials, equipment and incidentals necessary and required for the installation of a waterproof monolithic liquid membrane application.

3. Scope of Work

   a. Provide a watertight monolithic membrane over the entire structural slab surface and all other areas as indicated on drawings.

   b. Provide proper flashing around the perimeter of all horizontal areas high enough to prevent any possible ponded water from leaking in above this level.

   c. Treat all cracks and expansion joints; cold pour joints, edge joints and other joints as may be deemed necessary, after inspection of structural slab, prior to full application of liquid membrane, as described under application, joints and cracks.

   d. Provide proper flashing to any penetration through the areas specified, at least 6" above slab level.

   e. Treat all cants, as specified under application, prior to full application of liquid membrane.

4. Work related and specified in other sections.

   a. Concrete (finish and cure of slab)

   b. Drains, clean outs and pipe sleeves

   c. Railings, posts and sleeves

d. Reglets

e. Caulking

MATERIALS:

5. Shall be Tremproof Liquid Membrane as manufactured by The Tremco Manufacturing Company, Cleveland, Ohio, for horizontal and vertical membranes and for joint sealant.

a. Closed cell rod joint backing

b. Protection board, 1/8" Philip Carey, Asbestoseal or equal.

WORKMANSHIP AND INSTALLATION:

6. Verifying Conditions

a. Job site meeting of general contractor, applicator, architect and representative of manufacturer of liquid membrane shall be held to verify all conditions. All prints, drawings and specifications affecting the work of this section shall be examined.

b. No work will be undertaken until any adverse conditions are rectified or the subcontractor has received in writing waiver of responsibility from the general contractor or his licensed agent.

c. Execution of work under this section constitutes acceptance of conditions encountered in the field.

7. Surface Conditions

a. Concrete surfaces to be waterproofed shall be free of roughness or projections, with a smooth clean surface (wood float or equivalent as specified under concrete section) which will allow an even application of the Liquid Membrane.

b. Surfaces shall not contain any grease, oil or any other contaminants which will/could affect the complete bonding of the liquid membrane to the surface.

c. Concrete shall be free from surface laitance, loose aggregate, form release agents, curing compounds or other surface treatments.

d. Where pipes project through the slab, water-tight steel sleeves (standard weight galvanized, Josam 1870 A-2 or approved equal) shall be provided and extend a minimum of 2" above the finished floor level.

e. Drains shall be completely watertight, have an integral horizontal flange of at least 5" for adherence to and bonding with the liquid membrane and shall be set slightly lower than concrete surface. (The provisions of this paragraph are not applicable to the project.)

8. Surface Preparation

a. Surfaces shall be visibly dry and thoroughly cleaned, (remove all dust, dirt and loose materials) immediately prior to application of Liquid Membrane. Compressed air, vacuum cleaner or other suitable means shall be used.

b. Any and all exposed metal surfaces (pipes, sleeves, drains, vents, etc.) shall be cleaned; remove paint, rust, scales or any other foreign matter and shall be primed with Primer, at a height equal to the maximum flashing height and 6" out onto the concrete, and a coating of Liquid Membrane to a thickness of 60 mils shall be applied.

c. Wherever a vertical surface or protrusion exists, (parapet wall, pipes, or other projections which penetrate up from the slab) a cant strip shall be built out of the liquid membrane applying the liquid membrane in a triangular shape at least 1" horizontal onto the slab and 1" up the vertical surface. No plastic, wood, concrete, rubber or prefabricated cant strip of any kind will be accepted or approved.

d. Over the cant and extending 6" onto the slab surface and 6" up the vertical surface of any and all protrusions, pipes, etc. a coating of Liquid Membrane to a thickness of 60 mils shall be applied.

9. Joint and/or crack preparation

a. All joints shall be cleaned, cut back at least 1" from slab surface if preformed filler exists. Joint backing should be installed so as to provide a 1/2" channel below level of slab. This 1/2" deep expansion joint shall then be filled to surface level with Liquid Applied Membrane Waterproofing.

b. The joints so treated and any and all other non-moving joints and cracks that exist shall be cleaned and treated with a 60 mil coating of Liquid Membrane extending 6" from each side of crack or joint so treated.

c. All cracks larger than 1/16" shall be treated as joints (See 9-a).

10. All preparation of surfaces, cracks or joints, including priming, flashing, cant application or pretreatments as outlined under Paragraph C and D of this section shall be completed before the monolithic deck membrane is installed.

11. Monolithic Membrane Installation

a. After proper mixing the liquid membrane shall be applied directly to the slab in a uniform application of 60 mils. (This 60 mils is over and above any previously applied material.) Previously applied material, if cured, shall be cleaned with xylol immediately prior to monolithic application.

b. When the work is stopped long enough for the material to cure before the entire operation is completed, the first operation of the next work day shall be the wiping off of the previously applied material with xylol solvent for 6" back to remove dirt and dust that has accumulated. The new days work shall overlap previous work by 6". This will insure a monolithic membrane.

c. No felts or reinforcements of any kind shall be used in conjunction with the liquid membrane neither on horizontal or vertical surfaces.

d. Application may be made by means of a 1/8" notched trowel, which when smoothed out will

provide a 60 mil uniform application. All application by any means shall be in strict accordance with the recommendations of the manufacturer.

e. Immediately after application of the Liquid Membrane, an approved protection board, a minimum of 1/8" thick, shall be laid into the liquid membrane. Reasonable care shall be taken to protect the finished waterproofing from damage prior to application of percolation layer, slush course wearing courses, or sprayed or poured insulation.

12. Flood Tests

a. Prior to placing of wearing courses, the area shall be given a 24-hour, 1" deep flood test. Drains shall be plugged and barriers placed to contain the water. Notify architect of test being made. Cost of such tests and repair of any leaks shall be included in the contract price.

MANUFACTURER'S INSTRUCTIONS, REPRESENTATION AND INSPECTION:

13. Sub-contractor shall be familiar with Liquid Membrane Waterproofing materials and methods of application as approved by manufacturer prior to application.

14. Sub-contractor may request services of representative of manufacturer as required for instruction in preparation, mixing and/or application of materials. The manufacturer shall supply such service as required.

END OF SECTION

COMM. NO. 7057

INSULATION
Division 7 * Section 7B

GENERAL:

1. See drawings and details for type, location and quantities required.

FLEXIBLE TYPE INSULATION:

2. Install flexible type insulation in ceilings over entrance vestibules.

3. Insulation shall be mineral wool type (rock, slag or glass wool) in batt or continuous blanket form and 4 inch nominal thickness. Insulation shall be enclosed with a vapor barrier membrane on one face and a vapor permeable membrane on the other. The mineral wool shall not readily absorb or retain moisture, shall be incombustible and shall not attract insects or vermin. Insulation shall have a maximum thermal conductivity of 0.30 Btu/hr./sq. ft./^{o}F./ per inch thickness at 75^{o}F. mean temperature, excluding facings.

4. Install insulation with vapor barrier facing the room to be insulated. Install insulation with ends fitted tight and vapor barrier lapped; staple edges of paper to wood construction. Provide insulation stops between insulated and non-insulated areas.

END OF SECTION

COMM. NO. 7057

ROOFING AND SHEET METAL
Division 7 * Section 7C

GENERAL:

1. See drawings and details for type, quantity and location of roofing and sheet metal work required.

2. Roof drains, inside conductors, and flashing around pipes at roof line, are included under other Sections.

SHEET METAL:

3. Sheet metal shall be No. 16 oz. "Chinc" zinc-copper alloy as manufactured by Cheney Flashing Company.

PLASTIC CEMENT:

4. Plastic cement shall be an elastic waterproof material that will not stain stone, corrode copper or be affected by long exposure to extreme outside temperature. It shall form a thin, tough skin on exposed surfaces but remain soft and plastic underneath. Cement shall adhere to metal and masonry and be mixed to proper consistency and color at factory; color to match adjacent material as directed.

METAL BASE FLASHING:

5. Provide metal base flashing of where new elevator penthouse roof abuts vertical surfaces and where penthouse walls penetrate existing roof.

METAL CAP FLASHING:

6. Provide metal cap flashing for all new base flashing and elsewhere indicated on drawings.

7. Form flashing in 8 foot lengths except where shorter pieces are required; lap end joints 2 inches and solder. Make flashing at angles continous. Fold exposed bottom edge back 1/4 inch on underside for stiffness. Make cap flashing overlap base flashing 4 inches.

Extend cap flashing into masonry walls not less than two inches. Fasten flashing with wedges every 12 inches and fill reglet on vertical surfaces continuous with plastic cement.

METAL GRAVEL STOPS:

8. Install metal gravel stops of 16 oz. zinc-copper alloy at exposed edges of new roof.

9. Form gravel stop in 8 foot sections with end joints lapped 4 inches and soldered. Gravel stop shall be Cheney Standard Type 4 (4 inch).

ROOFING:

10. Roofing for new elevator penthouse and for new entrance vestibules shall be 55 lb. mineral-surfaced roll roofing, nailed to deck with joints sealed with plastic cement.

FLASHING ROOF DRAINS:

11. New roof drains and interior downspouts are specified under "Plumbing" Section. Flash new drains with terne sheets soldered to existing terne metal roofing.

METAL LOUVERS:

12. Fabricate fixed metal louvers in arch on rear elevation to size and design shown. Duct connections to metal louvers are included under Heating, Ventilating & Air Conditioning Section. Block out portions of louver around duct with flat sheet metal soldered to back of louver slats.

13. Construct louvers of 24 ga. galvanized steel sheets. Secure louver slats to frame by soldering. Install a 16 mesh or 14 x 18 mesh aluminum wire screen over duct opening on back side of louvers.

14. Prime all steel surfaces with a shop coat and give an additional coat to surfaces in contact with masonry before building in.

END OF SECTION

COMM. NO. 7057

CAULKING
Division 7 * Section 7D

GENERAL:

1. See drawings and details for items requiring caulking. Completely seal with caulking compound joints around frames and sills of doors, windows and other openings in exterior masonry walls, and all other joints or spaces noted on drawings to be caulked or pointed with mastic. Caulking of terra cotta is included under "Masonry Restoration" Section.

2. Caulking Compound: an elastic waterproof adhesive as manufactured by Tremco Manufacturing Co. or other approved manufacturer. Compound shall be of proper consistency to be readily worked and not be affected by vibration or long exposure to outside climatic and temperature changes. Compound shall form a thin tough elastic film on surface but remain permanently plastic underneath; it shall contain no acid or ingredients which will stain stone, corrode metal or have an injurious effect on painting. Compound shall be white or colored as required to match adjacent work.

3. Rope Yarn: raveled strands of non-staining rope fiber or cotton wicking.

Caulking Primer: a quick drying clear varnish thinned to proper consistency and of type recommended by manufacturer of compound.

APPLICATION:

4. Joints and spaces to be caulked shall be clean, free from dust and dry. When gun consistency compound is used, surfaces that are in contact with caulking before caulking is applied. Joints more than 3/4 inches deep and joints where a suitable backstop has not been provided shall be packed with rope yarn to within 1/2 inch of surface, before applying caulking. Caulk joints before final coat of paint is applied to adjacent work.

5. Apply compound with gun having proper size nozzle or with knife as required. Use sufficient pressure to fill all voids and joints solid; superficial pointing of joints with a skin bead will not be accepted.

Remove excess caulking and leave surfaces neat, smooth and clean. Upon completion, caulking shall have a smooth even finish. All caulked joints shall be watertight.

END OF SECTION

COMM. NO. 7057

DOORS AND HARDWARE
Division 8 * Section 8A

GENERAL:

1. Scope: The work covered by this Section of specifications consists of the following:

2. Repairing where necessary and installing existing doors indicated to be re-used.

3. Furnishing and installing all new wood doors as shown on schedule.

4. Installing hardware furnished as specified in this Section of specifications.

5. Reconditioning existing hardware for doors to be re-used.

6. Work Not Included: Doors and hardware for movable metal partitions are specified to be furnished under another Section of the specifications.

MATERIALS:

7. All doors and frames shall be of the material, type and finish as called for on drawings and schedules.

8. Doors identified by manufacturer's name and type or brand name may be substituted by others of equal quality only with the approval by the Architect.

9. For stock item door installation the Contractor shall submit for approval samples. For doors manufactured to order the Contractor shall submit for approval catalog cuts or shop drawings, showing details of manufacturing and installation.

WOOD DOORS:

10. Doors shall be a product of a recognized company and shall be manufactured in compliance with commercial standards.

11. Flush doors shall meet the requirements of CS 171.

12. For stain or natural finish the doors shall be of Good Grade. For paint finish doors shall be Sound Grade.

13. Solid core doors shall be of glued block, framed block glued.

14. Paneled doors shall meet the requirements of CS 171; Good Grade for natural finish and Sound Grade for paint finish. Laminated panels shall be not less than three ply.

15. Where shown doors shall be prepared for reception of glass or louvers.

16. Exterior soft wood doors shall be treated with water-repellent preservative.

HARDWARE:

17. Finish hardware will be selected by the Architect. The Contractor shall allow in his bid the amount of $2500.00 for purchase of new hardware required.

18. Should the selected hardware cost more than the amount allowed, the Contractor shall receive the difference as an extra.

Should the selected hardware cost less than the allowance, the contract price will be reduced by the amount of the difference.

19. The allowance for hardware shall be the purchase price only not including any profit or labor cost of installation.

CONSTRUCTION AND WORKMANSHIP:

20. Doors shall be installed after completion of all other work, which would raise the moisture content of wood doors or damage door surfaces. Fit, hang and trim as required by the opening the doors will close.

21. Provide 1/8 inch clearance at sides and top and clearance of 1/4 inch over thresholds and 1 inch over floors to allow for carpet.

22. Install hardware as required.

END OF SECTION

COMM. NO. 7057

ALUMINUM ENTRANCES & VESTIBULES
Division 8 * Section 8B

GENERAL:

1. This Section covers aluminum entrances and storm vestibules as shown on drawings and details.

2 Glass, glazing and rubber mats for entrances and vestibules are specified in other Sections.

MATERIALS:

3. Entrances shall be a complete assembly including structural steel and wood sub-framing, extruded aluminum shapes for jambs, sections, mouldings and cornice, with sheet aluminum for ceilings. Doors, frames and hardware shall be as manufactured by The Kawneer Company or other manufacturer approved by the Architect.

4. Aluminum extrusions shall be stock shapes as shown in catalogs of The Aluminum Company of America and The Kawneer Company and shall be 6063-T5 alloy and temper.

5. Aluminum sheets shall be 5005 alloy, to match extrusions.

6. All exposed aluminum shall have a dark bronze, anodic finish; submit sample for Architect's approval.

7. Thresholds shall be bronze of size shown on detail, cat. no. S-204-B (with no. 238 added on exterior doors) as manufactured by Reese Enterprises, Inc. or equal product of approved manufacturer.

8. Entrance doors shall be double acting, narrow stile design, series "190" as manufactured by The Kawneer Co. or equal.

9. Furnish concealed type overhead closers; maximum security type locks on exterior doors, keyed alike; push-pull bars style H-2 and weatherstripping at heads, jambs, sills and meeting stiles.

INSTALLATION:

10. Entrance vestibules shall be installed as shown in existing door openings. Remove existing doors and modify frames as shown on drawings.

11. Set frames plumb, square and level at proper elevation, and securely anchored. After glass is installed as specified under "Glass and Glazing", adjust hardware for proper operation.

12. Entrances shall be adequately protected from damage during construction work. Contractor shall be responsible for protection and its removal upon completion of all work.

END OF SECTION

COMM. NO. 7057

GLASS AND GLAZING
Division 8 * Section 8C

GENERAL:

1. See drawings and schedules for types, sizes and location of glass required.

2. Replace any broken glass in existing windows.

3. Comply with all requirements of an Act of the Georgia General Assembly designated as House Bill No. 412.

MATERIALS:

4. Tempered glass shall be 1/4 inch thick bronze plate glass which has been subjected to the tempering process, and meeting the requirements of ANSI Z-97.1-1966. Each piece of tempered glass shall be permanently labeled by the manufacturer by etching, sand blasting or ceramic material fired on the glass and must be visible after glazing in accordance with H.B. 412. Use tempered glass for all glazing of new aluminum entrance doors and vestibules.

5. All other glass shall be 3/16 inch clear sheet glass.

6. Mirrors shall be of mirror glazing quality plate glass 1/4 inch thick, with ground edges (not beveled). Backs shall be silvered two coats, and heavily electroplated with copper and given a prime coat and a coat of mirror-backing paint.

INSTALLATION:

7. Set tempered glass in vinyl glazing channels. Set clear sheet glass in doors and sidelight with glazing beads. Set mirrors on chromium plated brass clips or other approved device and anchor to wall.

8. At completion, leave glass whole, clean and free from cracks and rattles.

END OF SECTION

COMM. NO. 7057

FINISH SCHEDULE
Division 9 * Section 9A

EXPLANATION:

1. This Finish Schedule is written for the use of all trades and forms a part of each Section of the specifications. All descriptions of finish contained herein shall be prepared for, installed or finished as a part of the work of various trades, as required by the nature of the finish.

2. All work tabulated shall be provided by the Contractor except where indicated as existing, in which case the existing work shall be patched and repaired as necessary to put it in good condition.

BASEMENT:

Rooms Nos. 1, 2, 3, & 4 - Offices

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
West Wall - Existing brick, painted.
Other Walls - Gypsum wall board, painted.
Ceiling - Acoustic tile, ht. 7' - 6".

Room No. 5 - Closet

Floor - Carpet over existing concrete
Base - 4" vinyl, coved.
North and West Walls - Existing brick, painted.
South and East Walls - Gypsum wallboard, painted.
Ceiling - Acoustic tile, ht. 7' - 6".

Room No. 6 - Women's Toilet

Floor - Ceramic tile over existing concrete.
Base - Tile, coved.
Toilet & Lavatory Recess - Glazed wall tile, full height.
Other Walls - Vinyl wall fabric on gypsum wallboard.
Ceiling - Acoustic tile, ht. 8' - 0".
Toilet Partitions - Metal
Counter Top and Edge - Plastic laminate.
Equipment - Plumbing fixtures and toilet accessories as specified, mirror over lavatory counter.

Room No. 7 - Toilet Vestibule (Women)

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
Walls - Vinyl wall fabric on gypsum wallboard.
Ceiling - Acoustic tile, ht. 8' - 0".
Equipment - Mirror recessed in west wall, plastic laminate vanity shelf below mirror.

Room No. 8 - Men's Toilet

Floor - Ceramic tile over existing concrete.
Base - Tile, coved.
Toilet & Lavatory Recess - Glazed wall tile, full height.
Other Walls - Vinyl wall fabric on gypsum wallboard.
North and East Walls - Vinyl fabric and plaster on existing brick.
Ceiling - Acoustic tile, ht. 8' - 0".
Toilet Partitions - Metal.
Counter Top and Edge - Plastic laminate.
Equipment - Plumbing fixtures and toilet accessories as specified, mirror over lavatory counter.

Room No. 9 - Toilet Vestibule (Men)

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
South Wall - Vinyl wall fabric on gypsum wallboard.
Other Walls - Vinyl fabric on plaster on existing brick.
Ceiling - Acoustic tile, ht. 8' - 0".

Room No. 10 - Stair Hall

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
South and West Walls - Vinyl fabric on gypsum wallboard.
North Wall - Vinyl fabric on existing plaster.
East Wall - New and existing masonry plastered, vinyl fabric on plaster. Vinyl fabric over gypsum wallboard between pilasters.
Ceiling - Acoustic tile, ht. 7' - 6".
Wood Finish - Repair and refinish existing stairs. Repaint risers, stringers, balusters, newel posts and mouldings. Remove rubber treads; remove paint from handrails; stain and varnish treads and handrails.

Room No. 11 - Elevator Vestibule

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
Walls - Vinyl fabric over plaster on masonry.
Ceiling - Acoustic tile, ht. 8' - 0".

Room No. 12 - Employee's Lounge

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
Walls - Vinyl fabric on plaster over new and existing masonry; vinyl fabric over gypsum wallboard on frame partitions.
Ceiling - Acoustic tile, ht. 8' - 0".

Room No. 13 - Stair Hall

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
Walls - Vinyl fabric on plaster over new and existing masonry.
Ceiling - Acoustic tile, ht. 8' - 0".
Stairs - Carpet runner on treads and risers, vinyl fabric on walls, repaint handrails.

Room No. 14 - Mechanical Room

Floor - Existing brick and concrete, repainted.
Base - Painted, 6 in. high.
Walls - New and existing masonry, painted.
Ceiling - None.

Room No. 15 - Work Space

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
Walls - Plaster, painted; over new and existing masonry.
Ceiling - Acoustic tile, ht. 8' - 0".

Room No. 16 - Proof Room

Floor - Carpet over existing concrete.
Base - 4"vinyl, coved.
Walls - Repaint existing masonry walls; cover over existing window with painted plywood panel trimmed with quarter-round moulding.
Ceiling - Acoustic tile, ht. 8' - 0".

Room No. 17 - Bookkeeping

Floor - Carpet over existing concrete.
Base - 4" vinyl, coved.
Walls - Vinyl fabric over plaster on existing masonry; vinyl fabric over gypsum wallboard on frame partitions.
Columns - Vinyl fabric over plaster.
Ceiling - Acoustic tile, ht. 8' - 0".

Room No. 18 - Electrical Service Panel

Floor - Existing concrete.
Walls - Existing masonry, painted; new frame partitions, gypsum wallboard, painted.
Base - None.
Ceiling - None.

Room No. 19 - Compressor Room

Floor - Concrete.
Base - None.
Walls - Concrete block, not painted.
Ceiling - Exposed concrete.
Note - Walls extend to under side of concrete construction above.

Room No. 20 - Drive-up Tellers

Floor - Carpet.
Base - 4" vinyl, coved.
Walls - Vinyl fabric over plaster on concrete block.
Note - Masonry walls extend to under side of concrete construction above.
Ceiling - Acoustic tile, ht. 8' - 0".
Fixtures - Storage cabinet with plastic laminate counter top on west wall.
Equipment - Teller's window and work counter, door and frame by bank equipment supplier; not in this contract.

Elevator Machine Room - Unnumbered

Floor - Existing concrete.
Walls - Existing work, no new finish; new construction, exposed studs and concrete block.
Ceiling - None

Sprinkler Valve Room - Unnumbered

Floor, Walls and Ceilings - Existing finish to remain unchanged.

Vault - Unnumbered

Floor - Carpet over concrete.
Other Interior Finish - By bank equipment supplier, not in this contract.

New Drive-through and Parking Structure

Floor - Concrete, painted parking stripes and directional indications.
Base - Painted curbs.
Concrete Walls - Painted.
Concrete Block - Painted.
Columns - Painted.
Concrete Beams - Painted.
Concrete Joists - Painted.
Concrete Ceiling - Painted.
Existing Brick Walls - Plastered with Portland cement plaster and painted.

FIRST FLOOR

Space No. 100 - Loggia

Floor - Remove existing concrete; install new concrete slab with brick pavement.
Walls - Cleaned and painted as specified under "Masonry Restoration".
Ceiling - Stucco, painted.
Hanging Lanterns - Remove existing paint, clean, replace broken glass with new "Plexiglas", repaint and reinstall.
Note - Bracket lanterns at entrance on Hancock Avenue to receive same treatment as hanging lanterns.

Room No. 101 - Public Space

Floor - Carpet over existing terrazzo; rubber mats in new metal and glass vestibules.
Base - Existing marble
Wainscot - Existing plaster, repainted.
Chair Rail - Wood, repainted.
Walls - Existing plaster, repainted.
Cornice - Existing, repainted.
Ceiling - Existing plaster, repainted.

Room No. 102 - Tellers

Floor - Carpet over existing wood, remove resilient tile.
Base - 4" vinyl, coved.
East Wall - Pre-finished teak parquet flooring installed as wall paneling; cast aluminum eagle ornament.

Columns - Vinyl fabric over plaster.
Counter tops and dividers - Plastic laminate.
Center Cabinet and Work Surface - Plastic laminate.
Other Tellers Equipment - By bank equipment supplier, not in this contract.

Room No. 103 - Coupon Booths

Floor - Carpet over existing wood, remove resilient tile.
Trim, Sash and Base - Wood, painted over aluminum paint.
Vault Wall - Plaster, painted.
Other Walls - Vinyl fabric over existing plaster.
Ceiling - Acoustic tile, ht. 15' - 0".
Coupon Booth Partitions - Ht. 8' - 0", gypsum wallboard both sides, covered with vinyl fabric.

Room No. 104 - Officer's Space

Floor - Carpet over existing wood; remove resilient tile.
Base - Wood, painted.
Walls - Vinyl fabric on existing plaster.
Columns - Vinyl fabric on plaster.
Ceiling - Acoustic tile, ht. 15' - 0".
Wood Trim - Existing varnish finish to be coated with aluminum paint and repainted.
Sash and Doors - Same as wood trim.

Room No. 105 - Office

Floor - Carpet over existing wood; remove resilient tile.
Base - Wood, painted.
Walls - Vinyl fabric on existing plaster.
Ceiling - Acoustic tile, ht. 15' - 0".
Wood Trim - Existing varnish finish to be coated with aluminum paint and repainted.
Sash and Doors - Same as wood trim.
Note - Replace glass in doors and sidelights.

Room No. 106 - Conference Room

Floor - Carpet over existing wood; remove resilient tile.
Base - Wood, painted.
Walls - Vinyl fabric on existing plaster.
Ceiling - Acoustic tile, ht. 15' - 0".
Wood Trim - Existing varnish finish to be coated with aluminum paint and repainted.
Sash and Doors - Same as wood trim.
Equipment - New unit kitchen.

Room No. 107 - Toilet

Floor - Clean and repair existing.
Base - Clean and repair existing.
Wainscot - Clean and repair existing.
Walls - Existing plaster repainted.
Ceiling - Acoustic tile, at height of top of window trim.
Plumbing Fixtures - Clean, repair and recondition existing.
Accessories - Clean, repair and recondition existing.
Nickel Plated Items - Replated.
Wood Door - Replace glass with wood panel, coat with aluminum paint and repaint.
Wood Trim - Coat with aluminum paint and refinish in enamel.

Room No. 108 - Night Deposit Vault

Floor - Carpet.
Walls - Paint on existing surface.
Ceiling - Paint on existing surface.
Vault Door - Clean, repair and put in operating condition.

Room No. 109 - Director's Room

Floor - Carpet over existing wood, remove resilient tile.
Base - Wood, painted.
Walls - Vinyl fabric on existing plaster.
Ceiling - Acoustic tile, ht. 15' - 0".
Wood Door and Trim - Existing varnish finish to be coated with aluminum paint and repainted.

Room No. 110 - Stair Hall

Floor - Carpet over existing terrazzo.
Base - Existing marble, clean and repair.
Walls - Vinyl fabric on existing plaster.
Ceiling - Paint existing plaster.
Wood Finish - Repair and refinish existing stairs. Repaint risers, stringers, balusters, newel posts and mouldings. Remove rubber treads; remove paint from handrails; stain and varnish treads and handrails.

Room No. 111 - Elevator Vestibule

Floor - Carpet over existing wood floor.
Base - Marble (re-use base removed from Room 112).
Walls - Vinyl fabric over new smooth coat plaster.
Ceiling - Acoustic tile, ht. 10' - 0".

Room No. 112 - Installment Loan Dept.

Floor - Carpet over existing terrazzo and wood; remove resilient tile.
Base - Wood, painted; remove existing marble and re-use elsewhere.
Wainscot - Existing wood wainscot to be removed.
Walls - Vinyl fabric over plaster.
Columns - Vinyl fabric over plaster.
Ceiling - Acoustic tile, ht. 15' - 0".
Wood Trim and Sash - Existing varnish finish to be coated with aluminum paint and repainted.
Fixtures - Pre-finished, movable metal partitions and doors.

Room No. 113 - Stair Hall

Floor - Carpet over existing wood, remove resilient tile.
Trims, Sash and Base - Wood, painted over aluminum paint.
Vault Wall - Plastered and painted.
Other Walls - Vinyl fabric over existing plaster.
Stairs - Carpet runner on treads and risers, remainder including balusters and handrails, painted.

Vault - Unnumbered

Floor - Carpet over concrete.
Other Interior Finish - By bank equipment supplier, not in this contract.

SECOND FLOOR

Room No. 210 - Stair Hall

Floor - Carpet over existing terrazzo.
Base - Existing marble, clean and repair.
Walls - Vinyl fabric on existing plaster.
Ceiling - Paint existing plaster.
Wood Finish - Repair and refinish existing stairs. Repaint risers, stringers, balusters, newel posts and mouldings. Remove rubber treads; remove paint from handrails; stain and varnish treads and handrails.

Room No. 211 - Elevator Vestibule

Floor - Existing vinyl-asb. tile.
Base - Wood, painted.
Walls - Plaster, painted.
Ceilings - Plaster, painted.

Room No. 212 - Women's Toilet

Floor - Ceramic tile, new.
Base - Tile, new.
Wainscot - Glazed wall tile, ht. 6' - 10".
Walls - Vinyl fabric on plaster.
Ceiling - Acoustic tile, ht. to line with top of window trim.
Toilet Partitions - Metal.

Room No. 212a - Toilet Vestibule

Floor - Vinyl-asbestos tile same as in corridor.
Base - Wood, painted.
Walls - Plaster, painted.
Ceiling - Plaster, painted.

Room Nos. 200 thru 209, 213 thru 217

No new finish in these rooms.

THIRD FLOOR

Room No. 310 - Stair Hall

Floor - Carpet over existing terrazzo.
Base - Existing marble, clean and repair.
Walls - Vinyl fabric on existing plaster.
Ceiling - Paint existing plaster.
Wood Finish - Repair and refinish existing stairs. Repaint risers, stringers, balusters, newel posts and mouldings. Remove rubber treads; remove paint from handrails; stain and varnish treads and handrails.

Room No. 311 - Elevator Vestibule

Floor - Existing vinyl-asb. tile.
Base - Wood, painted.
Walls - Plaster, painted.
Ceilings - Plaster, painted.

Room No. 312 - Men's Toilet

Floor - Ceramic tile, new.
Base - Tile, new.
Wainscot - Glazed wall tile, ht. 6' - 10".
Walls - Vinyl fabric on plaster.
Ceiling - Acoustic tile, ht. to line with top of window trim.
Toilet Partitions - Metal.

Room No. 312a - Toilet Vestibule

Floor - Vinyl-asbestos tile same as in corridor.
Base - Wood, painted.
Walls - Plaster, painted.
Ceiling - Plaster, painted.

Room No. 308 - Office

Windows - Repair circular sash and install new wood stops for sash.

Room Nos. 300 thru 307, 309, 313 thru 316

No new finish in these rooms.

END OF SECTION

COMM. NO. 7057

LATHING AND PLASTERING
Division 9 * Section 9B

GENERAL:

1. See drawings and schedules for areas requiring plaster and metal lath and gypsum lath.

2. Do all patching and repairs to existing plaster work where required.

THICKNESS AND NUMBER OF COATS:

3. Except as otherwise indicated or specified, the minimum thickness of plaster shall be 5/8 inch on metal lath, concrete and other masonry and 1/2 inch on gypsum lath.

4. Plaster on gypsum lath and masonry surfaces shall be 2 coat work; on all other surfaces 3 coat work. Doubling back with brown coat over scratch coat before it is dry will not be permitted on 3 coat work, except over concrete.

PLASTER MATERIALS:

5. Gypsum plaster, gauging plaster, wood fibered plaster, Keene's cement, bond plaster, lime and Portland cement shall be standard products conforming to A.S.T.M. Specifications. Hydrated lime must be at least 92% hydrated and may be used immediately after mixing. Deliver manufactured materials in original packages or containers; keep cementitious materials dry until ready for use.

6. Plaster Aggregates shall comply with A.S.T.M. specification C35-39. Sand shall be clean and sharp.

LATH:

7. Gypsum lath shall be 3/8 inch thick, 16 inches wide by 48 inches long, plain or perforated and conforming to ANSI standard specifications. Secure lath to wood supports with 1-1/8 inch, 13 gauge, 3/8 inch head blued nails spaced 5 inches on centers and 3/8 inch from edge. Apply lath with long dimension at right angle to supports with joints in moderate contact. Stagger end joints, cut and neatly fit at angles, corners, around pipes and outlet boxes. Use gypsum lath as a plaster base for all

frame construction to be plastered except where metal lath is called for.

8. Metal lath shall be fabricated from copper bearing steel and coated with rust resisting paint after fabrication. Lath shall be not lighter than 2.5 lb. flat expanded mesh on walls and 2.75 lb. flat rib lath on ceilings. Use metal lath on all new plastered ceilings and for patching or extending walls or partitions of existing work that is plastered on metal lath. Use metal lath also over pipe chases and over joints between plaster on masonry or gypsum lath.

9. Corner beads shall be 26 gauge galvanized steel with continuous expanded flanges. Use corner bead on all exterior vertical corners to be plastered.

10. Corner lath strips shall be 2.5 lb. flat expanded metal lath bent at right angles to form 3 inch legs on each side. Fasten lath at edges only sufficiently to retain position during plastering. Install corner lath on all interior angles wherever lath is used on one or both sides of angle. Corner lath strips may be omitted where metal lath from one surface is continued around angle at least 4 inches.

11. Scratch and brown coats over bond plaster on concrete and on all types of lath: use gypsum wood fiber plaster without addition of sand; on masonry surfaces use 1 part gypsum wood fibered plaster and 1 part sand by weight.

APPLICATIONS OF BASE COATS:

12. Before plastering: see that grounds, furring, screeds, corner beads, base beads, corner lath and metal trim are secured in place. Dampen masonry and concrete surfaces by brushing or spraying with clean water just before plastering.

13. Scratch coat: Apply with sufficient force to adhere firmly to plaster base. When scratch coat for 3 coat work has set, scratch with nail float. Scratch coat on concrete shall be a thin coat of bond plaster followed by a brown coat of gypsum plaster and troweled into the scratch coat before it has set.

14. Brown coat: Apply to true planes and screed in both directions to within 1/8 inch of the finished surface; leave rough to receive finish coat. Scratch coat must be dry before brown coat is applied, except on concrete surfaces.

FINISH COATS:

15. Sand float finish shall be a factory prepared gypsum sanded plaster of color and texture selected. Apply over a thoroughly set gypsum, gypsum-vermiculite, gypsum-perlite or wood fiber base coat, which is not quite dry, and then trowel with a wood, carpet or cork float as required to produce the texture and color of sample selected. Finished surface shall be uniform, true, even and free from slick spots and color blotches. Use sand float finish for patching existing sand finish plaster.

16. White finish coat shall consist of 3 parts lime putty and 1 part gauging plaster, by volume, or 2 parts of dry pressure hydrated lime to 1-part of gauging plaster by dry weight, or a factory prepared white finish coat that will produce a hard smooth finish. Do not apply finish coat until undercoat is surface dry. Apply finish coat 1/8 inch thick; allow to set a few minutes and trowel to smooth, dense, hard, polished, white finish. Apply white finish coat over brown coat in all other areas requiring plaster finish.

PRECAUTIONS:

17. Maintain a minimum temperature of 50^{o}F. in spaces to be plastered. Protect plaster from freezing and too rapid drying. After plaster has set hard, provide free circulation of air.

18. Where plaster is applied direct to concrete surfaces without metal lath covering, clean concrete of all dust and loose particles by wire brushing, and of grease, oil or efflorescence by washing with a solution of 1 part muriatic acid to 10 parts water. Roughening of concrete surfaces to receive plaster is included under "Concrete Work".

PATCHING:

19. Point up around trim and other work. Cut out and patch defective and damaged plaster. Patching of plaster shall match existing work in texture and finish and, at joining with plaster previously applied, shall finish flush and smooth.

END OF SECTION

COMM. NO. 7057

GYPSUM WALLBOARD
Division 9 * Section 9C

GENERAL:

1. All materials shall be products of a manufacturer approved by the Architect and shall be applied by workmen experienced in this trade.

JOINT SYSTEM:

2. Drywall construction shall have a joint finishing system that qualifies as a Class A joint in accordance with "Standard Methods for Physical Testing of Gypsum Wallboard Joint Systems" published by the United States Gypsum Company.

DRYWALL SYSTEM:

3. The drywall system shall consist of a single layer of wallboard on each side of wood stud partitions, consisting of 2 x 4 studs 16 inches on centers with 5/8 inch gypsum wallboard nailed 7 inches on centers.

DELIVERY AND STORAGE OF MATERIALS:

4. All materials shall be delivered in their original unopened containers or bundles bearing brand name and name of manufacturer. Material shall be protected from damage and exposure to the elements. Damaged or deteriorated materials shall be removed from the premises.

MATERIALS:

5. Where brand names are specified herein, they refer to products of USG Co., equal products of other approved manufacturers will be acceptable.

6. Gypsum wallboard shall have eased radial edges specially designed to overcome joint deformation and shall comply with Fed. Spec. SS-L-30c and ASTM C-36 and shall be sheetrock SW Firecode wallboard 5/8 inch thick by 48 inch wide, for walls; use "C" type for ceilings.

7. Corner reinforcement shall be Perf-a-head No. 100 nails 1 3/8 inch GWB-54 annular ring nails.

8. Joint treatment products shall conform to ASTM C-474 and C-475 and Fed. Spec. SS-J-570a, Type 1, Type II and Type III.

PREPARATION:

9. When outdoor temperature is below 55 deg.F., heat shall be maintained in the building continuously and uniformly at not less than 55 deg. F. from one week prior to beginning of installation until wallboard application and joint treatment is completed. Installation shall not be started until windows are glazed and doors are installed unless openings are temporarily closed. Ventilation, either natural or supplied by fans or air conditioning system, shall be provided to remove excess moisture during joint treatment.

INSTALLATION:

10. Gypsum wallboard shall be applied first to the ceiling and then to the walls. To minimize end joints, use wallboard of maximum practical lengths. Boards shall be brought into contact, but shall not be forced into place. Where ends or edges abut, they shall be neatly fitted.

11. All ends and edges of gypsum wallboard shall occur over nailing members, except when joints are at right angles to framing members as in horizontal application or when end joints are backblocked.

12. End joints shall be staggered. Joints on opposite sides of partition shall occur on different studs. Wallboard shall be attached to framing supports by nailing not to exceed 7 inches on centers for ceilings and 8 inches on centers for walls.

13. Fasteners shall be spaced at least 3/8 inch from edges and ends of wallboard.

14. Corner beads shall be installed on all exterior corners, attached with suitable fasteners spaced 9 inches on centers on both sides.

15. Joint treatment shall be mixed according to manufacturer's directions.

16. All "V" grooves formed by abutting eased radial edges of wallboard shall be filled flush with plane of taper with pre-fill compound. Excess compound beyond the "V" groove shall be wiped clean leaving a flat joint for taping.

17. After pre-fill has hardened, a thin, uniform layer of taping compound shall be applied to all joints and angles to be reinforced. Reinforcing tape shall be applied immediately, centered over joint, and seated into compound. A skim coat shall follow immediately, but shall not function as a fill or second coat. Tape shall be properly folded and embedded in all angles to provide a true angle.

18. After taping compound has hardened, topping compound shall be applied, a finishing coat of topping compound shall be spread evenly over and extending slightly beyond fill coat on all joints and feathered to a smooth, uniform finish. Over tapered edges, finished joint shall not protrude beyond plane of surface. All taped angles shall receive a finish coat to cover tape and taping compound, and provide a true angle. Where necessary, sanding shall be done between coats and after final application of compound to provide a smooth surface, ready for decoration.

19. Taping compound shall be applied to all fastener depressions followed, when hardened, by at least two coats of topping compound, leaving all depressions level with plane of surface.

CLEANING:

20. At completion of installation of partitions and ceilings, all rubbish, excess material, and equipment shall be removed from the building and job site, leaving floors clean.

END OF SECTION

COMM. NO. 7057

CERAMIC TILE
Division 9 * Section 9D

GENERAL:

1. See drawings for areas requiring ceramic tile. Tile will not be required on walls or on floors back of or under built-in cabinets unless otherwise shown on drawings.

2. Install tile wainscots to heights called for by Finish Schedule.

3. Portland Cement: Waterproof type, of standard manufacturer; gray or white as required.

4. Sand: Sharp, washed clean, and uniformly graded from fine to coarse as follows: For pointing mortars, 100% passing No. 30 screen and not more than 5% passing No. 100 screen. For all other work 100% passing No. 4 screen and not more than 5% passing No. 100 screen.

5. Ceramic Glazed Wall Tile: Standard grade, 4-1/4 by 4-1/4 inch face, approximately 5/16 inch thick with cushion edges and colored mat or semi-mat glaze finish.

6. Wall Tile Trim Shapes: Make interior corners of cap and base square corner, combination angle and stretcher type and make interior corners or wainscot field butted square. Make external corners of field, cap and base rounded, combination angle and stretcher type. Use base No. A3601 under tile wainscot and use base No. A3610 where tile base occurs in plaster wall. Use cap No. A4200 at top of wainscot. Use shape No. A-7400 or A-7510 for shower curbs and jambs and low partition caps. Shape numbers referred to are standard with Tile Manufacturer's Association.

7. Vitreous Floor Tile: Tile shall be standard grade, unglazed vitreous porcelain ceramic mosaic type, approximately 1/4 inch thick in sizes and in pattern as selected.

8. Metal Lath: Flat expanded or flat rib expanded, 3.4 lbs. per sq. yd. Use metal lath over studs to receive tile scratch coat.

9. Marble thresholds: Provide domestic marble thresholds, sloped on one side, at doors to rooms having ceramic tile floors.

INSTALLATION:

10. Lay out tile on floors and lengthwise on walls so that no tile less than half size occurs. For height stated in feet and inches, maintain full courses to produce nearest attainable heights without cutting tile. Align joints in wall time vertically and horizontally; no staggered joints permitted.

11. Set, grout and clean floor and wall tile with cement mortar in accordance with ANSI Specs. 108.1 and 108.2, 1967 edition.

END OF SECTION

COMM. NO. 7057

ACOUSTICAL TREATMENT
Division 9 * Section 9E

DESCRIPTION:

1. Furnish all labor, materials, and equipment necessary to complete the acoustical work in accordance with this Section of the specifications and the applicable drawings.

2. The installation of all acoustical work covered in this Section shall be done by an acoustical specialty contractor.

ACCEPTABLE MANUFACTURERS:

3. Acoustical units and suspension systems specified herein by manufacturer's name are intended to establish the style, design and quality required. Equal products of other manufacturer may be acceptable subject to prior approval of the Architect.

JOB CONDITIONS:

4. Acoustical materials shall be installed in accordance with the requirements listed for "job conditions" in the current Acoustical Materials Association Bulletin.

ACOUSTICAL UNITS:

5. The acoustical material shall be mineral fiber lay-in panels, "Quadrette" as manufactured by Johns-Manville or "Texture-Tone" as manufactured by The Celotex Corporation. Panels shall meet the requirements of Federal Specifications SS-S-118a., Class 25 (Incombustible). The material shall also be listed and labeled by Underwriters' Laboratories, Inc. under Hazard Classification for flame spread of 0.25.

6. Materials shall be 24" x 24" x 3/4" with reveal edges, having a noise reduction coefficient of .65-.70 as reported in the Acoustical Materials Association Bulletin. The material shall have a factory-applied washable white finish and a light reflection value of not less than 75%.

EXPOSED METAL GRID SYSTEM:

7. The exposed grid system shall be the 556 Fire Front Snap-Grid system as manufactured by Chicago Metallic.

8. Exposed suspension members shall be finished in black enamel finish.

9. The grid system shall be installed to provide 24" x 48" & 24" x 24" modules as directed. The main carriers shall be hung by direct suspension from ceiling structure by means of #12 gauge galvanized wire.

10. Hangers and main runners shall be spaced and levelled in accordance with manufacturer's specifications and expected maximum load.

11. A black enamel finish metal angle moulding, matching the exposed grid, shall be installed where border units abut the wall or other vertical surface.

INSPECTION OF SURFACES:

12. The acoustical contractor shall be responsible for the examination and acceptance of all surfaces and conditions affecting the proper installation of his material, and shall not proceed until all unsatisfactory conditions have been corrected by others.

INSTALLATION:

13. The acoustical contractor shall furnish and install the exposed grid system and the lay-in panels in strict accordance with the manufacturer's recommendations in order to provide a satisfactory installation.

14. Recommendations outlined in ASTM Specification C636-69 and the current bulletin of the Acoustical and Insulating Materials Association, consistent with U.L. rating requirements, shall govern installation of the ceiling system.

15. All materials and workmanship furnished under this Section shall be guaranteed by the acoustical contractor for a period of one year from completion date, and on written demand by the Architect, any defective materials or workmanship shall be replaced or corrected.

END OF SECTION

COMM. NO. 7057

PARQUET FLOORING
Division 9 * Section 9F

GENERAL:

1. This Section of the specifications covers pre-finished teak parquet flooring used as wall panelling. See drawings and finish schedule.

MATERIAL:

2. Thai-Teak parquet flooring, "Straitline" pattern; size 10 by 10 inches, 5/16 in. thick; finish, #303 sealer and #401 wax.

MANUFACTURER:

3. Bangkok Industries, Inc. Phila., Importers & National Distributors; Local representative, George D. Bridges Co., 2767 Chamblee-Tucker Rd., N.E., Atlanta. 30341.

INSTALLATION:

4. Provide 5/8 in. thick plywood backing on wall to receive parquet. Apply with mastic or adhesive of type recommended by the distributor.

5. Apply parquet blocks with individual strips all running vertically and blocks laid in ashlar pattern, vertical joints in alignment and horizontal joints staggered.

END OF SECTION

COMM. NO. 7057

PAINTING
Division 9 * Section 9G

SCOPE OF WORK:

1. The following specifications cover the complete painting and finishing of all surfaces, interior and exterior, as shown on the drawings and described in the Finish Schedule except as otherwise specified.

2. Work Not Included:

   a. Copper, bronze, chromium plate, nickel, stainless steel, aluminum, lead, and bright metals.

   b. Factory applied finishes.

   c. Shop painting of structural and miscellaneous iron and steel.

   d. Painting of terra cotta trim.

3. The Painting Contractor shall supply all labor, materials, tools, ladders, scaffolding and equipment necessary for the completion of this work according to the drawings and specifications.

4. The Painting Contractor shall refer to the Bidding Documents that form a part of the Contract and to the alternates that affect the work under this section. Examine the specifications under other divisions and thoroughly familiarize himself with all provisions regarding their painting.

5. The Painting Contractor is responsible for inspecting the work of others prior to the application of any paint or finishing material. If any surface to be finished cannot be put in proper condition for finishing by customary cleaning, sanding and puttying operations, the Painting Contractor will immediately notify the general contractor or the Architect in writing; or assume responsibility for and rectify any unsatisfactory finish resulting.

6. Before proceeding with any painting, the Painting Contractor shall prepare and finish a sample room, complete or in part, as directed by the architect. Finish all areas or items in accordance with the specification and in colors selected by the architect. These areas or items will be inspected by the Architect or his representative, if such areas or items are not approved, finish other sample room. When approved, they shall serve as a standard for workmanship, appearance, and materials approved for similar areas or items throughout this project.

STORAGE:

7. Store all materials used on the job in a single place designated by the Owner or Architect. Keep storage place neat and clean and all damage to it or to its surroundings shall be made good by the painting contractor. All soiled or used rags, waste and trash must be removed from the building every night, and every precaution taken to avoid the danger of fire.

8. All materials used on the work shall be exactly as specified in brand and quality. No claim by the Painting Contractor as to the unsuitability or unavailability of any material specified, or his unwillingness to use same, or his inability to produce first class work with same, will be entertained unless such claims are made in writing and submitted with his bid. All paints, varnishes, enamels, lacquers, stains, paste fillers and similar materials must be delivered in the original containers, with the seals unbroken and labels intact. Wherever the abbreviation "P&L" appears in the following detailed specifications it shall mean "Pratt & Lambert".

9. Use materials only in accordance with the manufacturer's direction label on the container.

10. Use only pure and high quality paint materials which bear identifying labels on the containers.

11. Submit a "base bid", based on the terms of these specifications, including the use of materials of the specific brand, quality and color specified. If the Contractor desires to use materials other than those specified, he may exercise the option of submitting an alternate bid and accompanying that bid, with his request in writing for approval by the Architect.

He shall supply the name of the manufacturer and the specific brand name and number of each product he offers as a substitute; and state the amount to be added or deducted for such substitution. After the award, no substitution of materials for those mentioned in the accepted bid will be permitted. The Painting Contractor will be notified within ten (10) days after the award of the contract to him, if such substitution is accepted. If not so notified, the Contractor shall follow the specifications in accordance with the "base bid". All approved substitutions will be incorporated in the contract by change order.

12. The Architect will select and approve colors and determine the number of colors to be used on the job. If required, prepare panels for finish and color in advance, with the materials as specified, for the approval of the Architect.

WORKMANSHIP:

13. Employ skilled mechanics to ensure the very best workmanship. Quality workmanship is required. Materials to be applied by craftsmen experienced in the use of the specific product involved.

14. Where interior or exterior wood and metal are primed in the mill or shop as a part of the painting contract, use materials specified in every case for such surfaces and use in accordance with manufacturer's directions for the first or priming coat.

15. When surface temperature is below 50^{O}F, do not apply paints, varnishes, and special coatings, unless otherwise specified. Do not paint exteriors during frosty or rainy weather. Avoid painting surfaces while they are exposed to hot sun.

16. Clean floors and adjacent surfaces as well as all surfaces to be painted before painting.

17. Touch up knots, pitch streaks and sappy spots with recommended sealer before priming.

18. Putty nail holes, cracks and other defects after the first coat, with putty color to match the finish. Bring putty flush with the adjoining surface.

19. Wash metal surfaces with mineral spirits to remove dirt, oil and grease, before applying materials. Remove rust and scale by wire brushing or sanding clean before painting. Clean and touch up shop coats of paint that have become badly weathered, worn or marred with the Pratt & Lambert primer specified.

20. Clean galvanized metal thoroughly and apply recommended primer.

21. Back-prime interior and exterior trim before installation with Pratt & Lambert primer specified.

22. Apply all materials under adequate illumination, spread evenly and flow on smoothly without runs or sags.

23. All coats must be thoroughly dry before applying succeeding coats.

24. All work where a coat of material has been applied, must be inspected and approved by the architect before the application of the succeeding specified coat, otherwise no credit for the coat applied will be given, and the Contractor shall then assume the responsibility and recoat the work in question. Report each coat applied to the architect when completed for inspection and approval to comply with the above.

25. Sand woodwork smooth to be finished with enamel or varnish. Clean surface before proceeding with the application of the first coat.

26. Finish tops of upper sash and bottoms of lower sash same as interior finish. After doors are fitted, finish tops, bottoms and edges same as face and back.

27. Secure color schedules before applying paint or finish. Tint primer and undercoat to the approximate shade of the finish coat.

28. Concrete and masonry block units shall be dry and clean from all dust, dirt, oil and efflorescence before painting. When recommended, etch concrete that is dense and smooth or that has had a hardener applied before painting.

29. Do not paint plaster containing more than 15% moisture. Touch up suction spots or "hot spots" as recommended after application of the first coat and before applying the second coat.

30. Cut out scratches, cracks and abrasions in plaster surfaces and openings adjoining trim as required. Fill with a spackling compound or approved patching plaster, flush with adjoining surface, and when dry, sand smooth and seal before applying prime coat.

31. When paste wood filler applied on open grain wood, has "set", wipe across the grain of the wood, then with the grain to secure a smooth, clean surface.

32. Cover surfaces to be stained with a uniform coat and wipe off if required.

33. Between coats, sand enamel or varnish finish, applied to wood or metal, with fine sandpaper and clean to produce an even, smooth finish.

34. Finish closets the same as adjoining rooms, unless otherwise specified. Finish all other surfaces the same as nearest or adjoining surfaces unless otherwise specified or directed by the Architect.

35. All existing stained and varnished woodwork to be repainted shall first be coated with one coat of aluminum paint.

36. All existing interior painted woodwork shall be washed with mild sal soda solution and rinsed thoroughly. Remove loose, blistered and defective paint. Putty, glaze or spackle out all cracks and other irregularities.

37. Protect work, adjacent work, and materials at all times, by suitable covering. Upon completion of the work, remove all paint and varnish spots from the floors, glass and other surfaces. Remove from the premises all rubbish and accumulated materials of whatever nature not caused by others and leave work in clean, orderly and acceptable condition.

SCHEDULE OF PAINTING:

38. All interior concrete surfaces of parking structure, (except floor) and all exterior concrete masonry shall be given: 2 coats P. & L. Vapex Masonry Paint.

39. Interior concrete floors to be painted shall be given: 2 coats P. & L. Vapex Floor Paint.

40. All exterior iron and steel work to be painted shall be given: 1 coat P. & L. Noxide 90 Red Lead Primer, 1 coat P. & L. House Paint, (Omit first coat on previously painted metal.)

41. All existing exterior woodwork shall be given: 1 coat P. & L. House Paint, (Note: Window and door frames and sash are to be thoroughly cleaned by the masonry cleaning specified in Section 4B before repainting.)

42. New exterior woodwork shall be given: 1 coat P. & L. House Paint 305 Exterior Primer, 2 coats P. & L. House Paint.

43. All striping and marking on concrete surfaces of parking structure shall be given: 1 coat P. & L. Traffic Paint.

44. All concrete masonry to be exposed on interior shall be given: 1 coat P. & L. Primafil, 1 coat P. & L. Lyt-all Flowing Flat.

45. New plaster and gypsum wallboard walls and ceilings to be painted shall be given: 1 coat P. & L. Vapex Wall Primer, 1 coat P. & L. Lyt-all Flowing Flat.

46. Existing plaster walls and ceilings to be re-painted shall be given: 1 coat P. & L. Lyt-all Flowing Flat.

47. All interior iron and steel work shall be given: 1 coat P. & L. Interior Trim Primer, 1 coat P. & L. Vitralite Enamel Undercoating, 1 coat P. & L. Vitralite Enamel (Gloss or Eggshell as directed), (Note: Omit first two coats on previously painted metal.)

48. Hardwood interior woodwork to receive natural finish shall be given: 1 coat P. & L. Tonetic Wood Stain, 1 coat P. & L. "38" Pale Trim Varnish Glass, 1 coat P. & L. "38" Pale Trim Varnish Satin.

49. All new softwood interior trim shall be given: 1 coat P. & L. Interior Trim Primer, 1 coat P. & L. Vitralite Enamel Undercoating, 1 coat P. & L. Vitralite Enamel Eggshell.

50. Existing painted woodwork shall be treated as specified in paragraph 36 above then given: 1 coat of equal parts Vitralite Enamel Undercoating and Vitralite Enamel mixed, 1 coat of P. & L. Vitralite Enamel Eggshell.

51. Existing stained and varnished woodwork shall be treated as specified in paragraph 35 above then given: 1 coat of P. & L. Vitralite Enamel Eggshell.

END OF SECTION

COMM. NO. 7057

VINYL WALL COVERING
Division 9 * Section 9H

EXTENT OF WORK:

1. Furnish all labor, materials, equipment and services necessary for, and reasonably incidental to, the installation of vinyl wall covering as called for in "Finish Schedule" and as specified herein.

MATERIALS:

2. All vinyl wall covering shall be Vicrtex V.E.F. as manufactured by L. E. Carpenter & Company, Wharton, N.J.

3. The Contractor shall allow $5.00 per lineal yard (54 in. wide) for purchase of the vinyl wall covering only. All other factors such as labor, paste, freight, and applicable taxes are to be added to this allowance. Final adjustments will be made after all patterns and colors have been selected by the Architect.

4. Paste shall be F-1460W as manufactured by L. E. Carpenter & Company.

PREPARATION:

5. Examine all surfaces to receive vinyl wall covering and report to the Architect, in writing, any condition that would detract from a perfect installation. Start of work will indicate acceptance of wall surfaces as being satisfactory.

WORKMANSHIP:

6. All seams shall be closely and neatly butted. All air pockets and bubbles eliminated; so as to provide a firm bond between the wall covering fabric and the underlying surface on all areas. Seams shall be made at least 4 inches from inside and outside corners; horizontal seams will not be allowed.

7. Surfaces of wall covering shall be cleaned as the work progresses, and all excess paste shall be removed from surface.

END OF SECTION

COMM. NO. 7057

MOVABLE METAL PARTITIONS
Division 10 ** Section 10A

DESCRIPTION:

1. Weber Movable Partitions of height and panel construction as detailed on plans shall be the standard of all bids. Similar products of other manufacturers may be quoted as alternates, subject to Architect's approval. Any deviations from specified standards shall be clearly stated.

PANELS:

2. As noted on plans, panel units shall be of modular widths, 1-3/4" thick. All panels factory-assembled to interlock with posts, straight and true, without light lines at joints. Panel cores shall be of treated honeycomb construction.

STEEL:

3. Panel faces shall be of 22 gauge furniture quality steel bonded to interior stiles and rails. The electro-galvanized, bonderized steel faces shall be finished with a coat of primer and a coat of baked enamel of standard selected color.

POSTS:

4. Anodized aluminum extrusions, 6063T5 alloy, 1-3/4" square and grooved to accept plastic feature strips that conceal assembly slots. All four sides of posts slotted for panel connectors and glass frames. Base of post factory-equipped with neoprene based leveling assembly, threaded for 1-3/4" elevation to compensate for uneven floor conditions. Leveling assemblies concealed with adjustable plastic plinth. Posts capped with flush 14 gauge snap-in cover, plated to match post finish and factory-installed. All posts shall be ready to accept optional floor anchor without alteration.

HARDWARE AND ACCESSORIES:

5. All required hardware for assembly of panels and posts shall be included with shipment. Floor anchors shall be a welded assembly equipped with both interior and exterior support for maximum holding strength at the base of the post. Anchors to be rigidly floor-

fastened with screws, bolts, or power inserts of proper size furnished by partition installer to comply with composition of floor. Wall brackets or wall angles shall be applied to all end posts at building wall junctions to insure rigidity. Door hinges to be $3\frac{1}{2}$ x $3\frac{1}{2}$ reverse swage type; lock sets to be of cylinder type locks with key, applied at factory. Floor cups shall be used on such posts as required to maintain partition run alignment. Shelves and/or coat hanging items are not required.

DOORS:

6. Doors of standard 36" modular width and 1-3/4" thickness shall be furnished. Doors shall be wood and shall be of hollow-core construction and have hardwood surfaces stained and finished. Std. closed base is required, door extensions shall be factory-applied at bottom of door.

CLOSED BASE:

7. Closed base shall be of rigid high-impact extruded black vinyl, furnished in continuous lengths for a minimum of joints. Base to have removable side members for easy access to utility space.

WALL FILLER:

8. Two-piece aluminum starter channel is to be used with filler to finish a partition run in an odd dimension. For filler dimensions up to 8 inches, special 4 or 8-inch flush filler panels shall be furnished ready to cut to desired width, having solid core construction with painted hardboard surfaces. For filler dimensions over 8 inches, a standard modular panel shall be scribed to width.

ELECTRICAL:

9. Cutouts and boxes for convenience outlets and switches shall be factory-fabricated with thinwall conduit to panel raceway and cover plate. Wiring and fittings to be furnished as specified in Electrical Section.

WORKMANSHIP:

10. Partitions shall be installed atop finished floors, straight, plumb and in a rigid, substantial manner. Door hardware shall be adjusted to work easily and minor defects and blemishes shall be touched up. All packaging material shall be removed and the partitions washed clean and left in perfect condition.

END OF SECTION

COMM. NO. 7057

METAL TOILET COMPARTMENTS
Division 10 * Section 10B

GENERAL:

1. See drawings for size, design arrangement and location of compartments.

2. Compartments shall be as manufactured by Sanymetal, Metpar, Henry Weiss, or other manufacturer of equal quality as approved by the Architect.

MATERIALS AND FINISH:

3. All steel shall be 302 stainless steel. Use No. 20 gauge for pilasters, doors and partitions. All stainless steel shall have #4 finish.

CONSTRUCTION:

4. Pilasters shall be formed of two steel sheets locked on all edges with No. 16 gauge, 1-1/4" deep channel of No. 16 gauge stainless steel and cemented under pressure to a sound deadening insulating filler. All edges shall be welded at frequent intervals to made a 1-1/4 "thick reinforced, interlocked, welded unit.

5. Doors shall be same construction as pilasters but 1" thick.

6. Partitions shall be made of two steel sheets formed into a pan shape and cemented under pressure to a dense sound-deadening insulating core; the sheets to have edges formed to take a continuous oval shape crown locking mould on all four sides with corners mitered, welded and ground smooth.

HARDWARE:

7. Doors shall be equipped with concealed gravity hinge, hinge brackets, latch and bumper coat hook of chromium plated forged brass; combination strike and keeper shall be stainless steel.

8. Paper holders shall be manufacturer's stock design for roll paper. Furnish one paper holder for each compartment.

ERECTION:

9. Erect compartments rigid, straight, plumb and level. Secure partitions to walls with not less than 2 stirrups located near top and bottom. Anchor pilasters to floor with 3/8" cadmium plated bolts set in expansion shields and extending at least 2-1/2" into floor construction. All evidence of drilling and cutting shall be concealed in the finished work.

SHOP DRAWINGS:

10. Submit to Architect for approval, shop drawings showing layout and details of construction of all conditions. Do not fabricate any work until shop drawings have been approved.

END OF SECTION

COMM. NO. 7057

TOILET ROOM ACCESSORIES
Division 10 * Section 10C

GENERAL:

1. See drawings, details and schedules for location of toilet accessories and quantity required.

2. Toilet room mirrors are specified under "Glass and Glazing"; paper holders are specified under "Metal Toilet Compartments".

MATERIALS AND CONSTRUCTION:

3. Accessories shall be constructed of brass with a polished chromium plate finish applied over nickel plating, or shall be of stainless steel with a bright polished finish. Thickness of metal shall be sufficient for the purpose intended and stock with the manufacturer.

4. Manufacturer's name and catalog numbers listed below establish the standard of quality required, but are not restrictive. Equal products of other manufacturer may be substituted subject to Architect's approval.

ACCESSORIES:

5. Towel dispenser and disposal combination: Stainless steel, recessed type, Bobrick No. B-3944, or approved.

6. Soap dispensers: Stainless steel, recessed type, for powdered soap, Bobrick No. B-341, or approved.

7. Feminine napkin vendor and disposal unit: Stainless steel, recessed type, for free dispensing, capacity 40 napkins, with matching disposal unit, American Hygenic Corp. Model 40/R.

INSTALLATION:

8. Install accessories in accordance with manufacturer's directions where indicated or directed.

9. Use special care to install in a rigid and secure manner.

10. After installation, leave accessories clean, whole and free from defects.

END OF SECTION

COMM. NO. 7057

UNIT KITCHEN
Division 10 * Section 10D

GENERAL:

1. Furnish and install where shown in Room 106 unit kitchen as specified herein.

UNIT KITCHEN:

2. Manufacturer: Acme-National Refrigeration Co., Inc.

3. Model: DEB 59Y

4. Dimensions: 42" wide, 36" high, 24" deep.

5. Electric Range: 230 volt, 2 burner.

6. Refrigerator: 6 cu. ft.

7. Sink: Stainless steel, with swing spout and aerator.

8. Cabinet: Walnut finish vinyl clad steel with matching plastic laminate top.

END OF SECTION

COMM. NO. 7057

CARPETS AND MATS
Division 12 * Section 12A

GENERAL:

1. Work Included: Rubber-backed carpeting, applied with adhesive as specified in areas as shown on Finish Schedule. Entrance floor mats.

2. Samples: Submit samples of carpet and trim strip. Obtain Architect's approval before proceeding.

3. Delivery of Materials: Deliver carpet in bales with manufacturer's registry numbers attached and intact. Store carpet in dry, well-ventilated space; protect from damage.

4. Approved Manufacturers: Associated Rug Mills.

5. Type: Meadows, 2500 Series, with full 36 oz. high density rubber backing; flame retardant treated.

6. Detailed Requirements:

(1) 68% acrylic
(2) 30% modacrylic
(3) 2% anti-static yarn

7. Trim strip: Extruded aluminum, smooth surface, natural aluminum color.

8. Color: 2505 Heather.

INSTALLATION:

9. Carpeting subcontractor: Must be approved by carpet manufacturer and the Architect.

10. Preparation for Laying: Remove grit, dirt and lint; repair minor irregularities in concrete floor slab.

11. Laying: Install carpet by cementing directly to wood and concrete floors with waterproof adhesive or linoleum paste. Stretch to true even surfaces. Cut and fit closely and evenly at walls. Seams and cross seams trimmed and neatly fitted so as to be unnoticeable. Hold cross seams to an absolute minimum. Fill strips, where required, not less than 9 inches wide and 36 inches long.

12. Trim Strips: Provide wherever carpeting abuts other types of floors or floor covering. Fasten to floor in a secure manner.

13. Cleaning: After installation is complete, clean dirt and debris from surfaces. Clean spots with approved spot remover. Remove loose threads with sharp scissors, and vacuum clean carpet. Leave surfaces clean and free from ripples, scallops and puckers.

14. Remnants: Upon completion, bundle all usable remnants and deliver to Owner's representative for possible future repairs.

15. Guarantee: Correct defects in materials or workmanship or both; repair or replace defective carpet as necessary during the 1-year guarantee period, at no cost to the Owner.

ENTRANCE FLOOR MATS:

16. Material: Provide entrance mats of prime quality rubber compound as made by Durable Mat Co., Samuel Furiness Mat Co., Inc. or National Floor Products Co.

17. Type: Mats shall be solid, not perforated, with pyramid non-skid surface and pebble base.

18. Size: Mats shall be 1/2 inch thick and shall be custom made to the size of mat frame as shown on drawings.

19. Color: Two-color, standard black, with white lettering reading "FIRST AMERICAN BANK".

20. Installation: Lay mats in entrance vestibules specified under another Section.

END OF SECTION

COMM. NO. 7057

ELEVATOR
Division 14 * Section 14A

SCOPE:

1. The work under this section is subject to those provisions of the General and Special Conditions, which in any way affect the work herein specified.

2. This specification is intended to cover the complete furnishing and installing of One (1) Traction passenger elevator as manufactured by Dover Corporation/ Elevator Division except as specified under "Work Not Included". All work shall be performed in a workmanlike manner and is to include all work and material in accordance with the drawings and as specified herein. In all cases where a device or part of the equipment is herein referred to in the singular number, it is intended that such reference shall apply to as many such devices as are required to complete the installation.

3. All work shall be performed in accordance with the latest revised edition (as of the date bids are taken) of the American National Standard Safety Code for Elevators, Dumbwaiters, Escalators, and Moving Walks (ANS A-17), the National Electrical Code, and/or such State and Local Codes as may be applicable. Should, subsequent to the date bids are taken, changes be made in any code or should rulings by any code enforcing authorities extend the application of the code, the Elevator Contractor shall be paid, as an addition to the contract price, for the work and materials necessary to make the installation comply with such changes.

4. Approved Manufacturers:

   a. Dover Elevator Company

   b. Westinghouse Elevator Company

   c. Otis Elevator Company

5. All others wishing to bid must request approval in writing, at least 10 days prior to bid date. Documentary support information on manufacturing capability, financial standing and service organization will be required.

6. All approved bidders will be added by addendum.

DRAWINGS:

7. The Elevator Contractor shall, after structural and architectural drawings are furnished, prepare drawings showing the general arrangement and loads of the elevator equipment. These drawings shall be approved and the hoistway size guaranteed before proceeding with fabrication and installation of the elevators.

LIABILITY:

8. The Elevator Contractor shall not be liable for any loss, damage, or delay caused by acts of government, strikes, lockouts, fire, explosions, theft, floods, riot, civil commotion, war, malicious mischief, acts of God, or any cause beyond his reasonable control and in no event shall he be liable for consequential damages.

PAINTING:

9. All exposed metal work furnished by the Elevator Contractor under these specifications shall be properly painted after installation, except as otherwise specified.

PERMITS, TAXES AND LICENSES:

10. All applicable sales and use taxes, permit fees and licenses, as of the date bids are taken, shall be paid for by the Elevator Contractor. The Elevator Contractor shall be paid, as an addition to the contract price, any additional taxes, fees, or other charges exacted from the Purchaser or the Elevator Contractor on account thereof, by any law enacted after bids are taken.

STORAGE:

11. A dry and protected area, conveniently located to the elevator hoistway, will be assigned to the Elevator Contractor without cost, for storage of his material and tools.

TEMPORARY SERVICE:

12. Should the service of any elevator be required before completion and final acceptance, permission in writing must first be obtained from the Architect. In addition, the User agrees to sign the Elevator

Contractor's temporary acceptance form and be bound by the terms and conditions thereof.

MAINTENANCE SERVICE:

13. The Elevator Contractor shall furnish maintenance and call-back service on each elevator after it is completed and placed in operation for a period of 3 months. This service shall consist of examinations of the equipment, adjustments, lubrication, cleaning, supplies and parts to keep the equipment in proper operation, except such adjustments, parts or repairs made necessary by abuse, misuse or any other causes beyond the control of the Elevator Contractor. All work will be done by trained employees of the Elevator Contractor during regular working hours of the trade.

WARRANTY:

14. The Elevator Contractor shall warrant the equipment installed by him under these specifications against defects in materials and workmanship and will correct any defects not due to ordinary wear or tear or improper use or care which may develop within one year from the date each elevator is completed and placed in operation. This warranty is not intended to supplant normal maintenance service and shall not be construed to mean that the Elevator Contractor will provide free service for periodic examination, lubrication, or adjustment due to normal use, beyond that included in the specifications; nor will the Elevator Contractor correct, without charge, breakage, maladjustments, or other trouble arising from abuse, misuse, improper or inadequate maintenance, or any other causes beyond his control. If there is more than one unit in this specification, this section shall apply separately to each unit as completed and placed in operation.

WORK NOT INCLUDED:

15. This specification does not include the following work, and is conditioned on the proper performance of such work by the General Contractor or other Sub-Contractors.

a. A legal hoistway, properly framed and enclosed, and including a pit of proper depth, provided with ladder, drains, lights, access doors, and waterproofing, as required. Suitable machine room, adequate for the elevator equipment, including floors, gratings, foundations, lighting, ventilation and heat to maintain the room at a

temperature of 50° F. minimum to 100° F. maximum.

b. Adequate supports and foundations to carry the loads of all equipment, including supports for guide rail brackets and machine beams or overhead sheaves (if furnished). If adjacent hoistways are utilized, divider beams at suitable points shall be provided for guide rail bracket support.

c. Suitable connections from the power mains to each controller or motor generator set starter, signal equipment feeders as required, including necessary circuit breakers and fused mainline disconnect switches.

d. Outlets at the center of the hoistway for lighting in the car. Electric power without charge, for construction, testing and adjusting, of the same characteristics as the permanent supply.

e. Door frames with extensions to beam above if required on hoistway sides and sills for freight elevators, including finish painting of these items.

f. Cutting of walls, floors, etc., and removal of such obstructions as may be necessary for proper installation of the elevator. Setting of anchors and sleeves. Pockets or blockouts for signal fixtures.

g. All sill supports, including steel angles where required, and sill recesses and the grouting of door sills and hoistway frames after installation.

h. All painting, except as otherwise specified.

i. Provide temporary enclosures or other protection from open hoistways during the time the elevator is being installed.

j. Proper trenching and backfilling for any underground piping or conduit.

DESCRIPTION OF EQUIPMENT:

CONTROL:	Two Speed (AC)
CAPACITY:	2,000 lbs.
SPEED:	125 FPM
OPERATION:	Selective Collective
CAR SIZE.	6' - 4" x 4' - 5"
TRAVEL:	44' -0" (Plus or Minus)
POWER SUPPLY:	208 Volts, 3 Phase, 60 Cycle
MACHINE LOCATION:	Mounted in basement machine room at side of hoistway.
STOPS:	Four (4)
OPENINGS:	FFour (4) (In-line)
HOISTWAY DOORS: (SIZE & TYPE)	3' - 0" x 7' -0" Single Slide
DOOR OPERATION:	(DC) Powered
CAR ENCLOSURE:	Dover Design No. DLP 4361, with side and rear walls of Formica. Stainless steel handrail on rear wall.
SIGNALS:	Illuminated car and hall pushbutton, alarm button.
SPECIAL FEATURES:	Car position indicator, emergency lighting.

PLATFORM AND SLING:

16. The platform shall have a fabricated steel frame of formed and structural steel shapes, gusseted and rigidly welded. Flooring shall be two layers of 3/4" plywood laid over steel stringers. Finished floor covering to be installed on top of car floor. The underside

of the platform will be fireproofed. The platform will be completely isolated from the car sling and bracing members by vibration absorbing materials.

17. The sling shall consist of heavy steel channel stiles, properly affixed to a steel crosshead and safety channels with adequate bracing members, to remove all strain from car enclosure.

CAR ENCLOSURE (ELEVATOR CAB):

18. An elevator cab of ornamental design, with appurtenances and appointments as selected and approved shall be furnished and installed.

19. In accordance with the following: Dover Design No. DLP-4361; with ceiling of unitized steel contruction with Emergency Exit; stainless steel Entrance Columns and Header; Side, Rear, and Front Returns of wood core construction with Formica finish inside and fireproofing on outside; stainless steel Flush Base; Indirect Fluorescent Lighting, projected through a white plastic grid diffuser, Emergency Lighting.

20. The following accessories to be provided:

a. Handrails of stainless steel on rear wall.

b. Exhaust Fan and ventilation grids in Base.

c. Protective Pads and Hooks. Finish Flooring to be vinyl tile.

d. Finish on car doors to be laminated plastic; as selected from manufacturer's standard colors.

CAR DOORS:

21. The car entrance shall be provided with horizontal sliding doors. Panel rigidity to be obtained by suitable steel reinforcements. Doors shall be hung on sheave hangers with polyurethane tires, and sheaves not less than 3 1/4" diameter running on a polished steel track, and guided at the bottom by non-metallic shoes sliding in a smooth threshold groove.

ALARM BELL:

22. An emergency alarm bell shall be located in conformance with ANS A-17 Code requirements, and connected to a plainly marked pushbutton in the car operating panel.

CAR AND COUNTERWEIGHT GUIDES AND GUIDE SHOES:

23. Guides for the elevator car and counterweight shall be planed steel elevator guide rails, properly fastened to the building structure with steel brackets and have sections as specified by the ANS A-17 Code. Roller guides, consisting of a minimum of three tires, shall be mounted on top and bottom of the car and counterweight frame, and shall be held in contact with the guide rail by adjustable devices. Roller guides shall run on dry, unlubricated rails.

MACHINE:

24. The machine shall be of the single worm geared traction type, with motor, brake, gearing and driving sheave mounted in proper alignment on a steel bedplate. The worm shall be of hardened and ground steel, integral with the worm shaft, and shall be provided with a ball or roller thrust bearing designed to take the end thrust of the worm in both directions. The worm gear shall be hobbed from a bronze rim which shall be accurately fitted and bolted to the gear spider. The sheave and gear spider shall be supported by heavy duty ball or roller bearings. The roller and anti-friction metal bearings shall be provided with adequate means of lubrication.

MOTOR:

25. The motor shall be designed and built expressly for elevator service with a high starting torque and low starting current. The motor armature shall be dynamically balanced and supported by ball bearings of ample capacity. It shall be rated in accordance with the standards of the I.E.E.E. for 50°C., 30 minute continuous operation motors.

BRAKE:

26. The electric brake shall be spring applied. It shall be held open by an electro-magnet actuated by the controller and designed to make smooth, positive stops. It shall be designed to automatically apply in event of interruption of power supply from any cause.

MACHINE LOCATION:

27. The machine shall be mounted in basement machine room on structural steel beams or channels furnished in place with any necessary bearing plates by the Elevator Contractor. These beams shall be securely fastened to supports provided by others.

CONTROL:

28. The control equipment shall be full magnetic, suitable for the type operation specified, and shall provide smooth acceleration and retardation. The power controller shall have magnetic switches mounted on panels supported by a substantial steel frame. The car shall be driven by a hoisting motor of the two speed, high internal resistance squirrel cage type, with the ratio of fast to slow speed of not less than four to one. Protection shall be provided against phase failure and phase reversal.

29. A dry type rectifier, mounted on the controller, shall provide direct current for the brake and power contractors.

ROPES:

30. Provide suitable traction steel hoist ropes of size and number to insure proper wearing qualities. As a minimum, the number of ropes shall comply with the factor of safety requirements of the ANS A-17 Code. Governor ropes shall be iron or steel. All ropes shall consist of at least six strands wound about a hemp core center. Adequate compensation for weight of hoist ropes to be furnished when required to maintain proper counterbalance ratio.

COUNTERWEIGHTS:

31. Each elevator shall be suitably counterbalanced for smooth and economical operation. Cast iron or steel plate weights shall be contained in a structural steel frame. The counterweight shall be equal to the complete elevator car and approximately 40% of the specified load.

SAFETY AND GOVERNOR:

32. The car safety shall be mounted on the bottom members of the car frame and shall be operated by a centrifugal speed governor located over the hoistway. The governor will be designed to cut off power to the motor and apply the brake whenever the governor indicates the car has excessive speed.

AUTOMATIC TERMINAL LIMITS:

33. Electric limit switches shall be placed in the hatchway near the terminal landings and be designed to cut off the electric current and stop the car should it run beyond either terminal landing.

AUTOMATIC SELF-LEVELING:

34. The elevator shall be provided with a self-leveling feature that will automatically bring the car to the floor landings. This self-leveling shall, within its zone, be entirely automatic and independent of the operating device and shall correct for overtravel or undertravel. The car shall also be maintained approximately level with the landing irrespective of the load.

BUFFERS:

35. Substantial buffers under car (and counterweight) shall be furnished and installed in the elevator pit. They shall be mounted on continuous channels fastened to the elevator guide rail or securely anchored to the pit floor and substantial extensions will be provided, if required. Buffers shall comply with ANS A-17 Code requirements.

CAR TOP INSPECTION STATION:

36. A car top inspection station with an "emergency stop" switch and with constant pressure "up-down" direction buttons shall make the normal operating devices inoperative and give the inspector complete control of the elevator.

DOOR OPERATION:

37. A direct current motor driven operator shall be furnished and installed, designed to operate the car and hoistway doors simultaneously at a maximum speed of 2'0" per second. Door movements shall be electrically cushioned at both limits of travel and the door operating mechanism shall be arranged for manual operation in event of power failure. The leading edge of the car door shall be provided with a retractable reversal edge arranged to automatically return car and hoistway doors to the open position in event the doors are obstructed during closing cycle. Doors will then resume closing cycle. Doors shall automatically open as the car arrives at the landing and shall automatically close after an adjustable time interval or when the car is dispatched to another landing. Direct drive geared operators, A.C. controlled units with oil checks, or other deviations from the above are not acceptable.

INTERLOCKS:

38. Each hoistway entrance shall be equipped with an approved type interlock tested as required by Code. The interlock shall be designed to prevent operation of the car away from the landing until the doors are locked in the closed position as defined by Code and shall prevent opening the doors at any landing from the corridor side unless the car is at rest at that landing or is in the leveling zone and stopping at that landing.

HOISTWAY DOOR UNLOCKING DEVICE:

39. Hoistway door unlocking devices required by the ANS A-17 Code shall be provided to permit authorized persons to gain access to hoistway when elevator car is away from the landing.

DOOR HANGERS AND TRACKS:

40. For each hoistway sliding door, furnish and install sheave type two point suspension hangers and tracks complete. Sheaves shall be 3 1/4" in diameter and have polyurethane tires with ball bearings properly sealed to retain grease. Hangers shall be provided with an adjustable slide to take the up-thrust of the doors. Tracks are to be drawn steel shapes, smooth surface and shaped to conform to the hanger sheaves.

HOISTWAY ENTRANCES:

41. Hoistway entrances of the hollow metal, horizontal sliding type shall be furnished and installed complete at each of the hoistway openings.

42. Entrances will be manufacturer's standard design and bear a fire label as recognized by the ANS A-17 Code. They shall consist of frames, sills, doors, hangers, hanger supports, hanger covers, fascia plates, and all necessary hardware. Finish to be solid color enamel as selected from elevator manufacturer's standard colors, or in baked on prime coat suitable for finishing on the job site by others. Entrances shall bear "B" label fire rating.

43. The entire front wall of the hoistway is to be left open or a rough opening provided which is 12" greater in width and 6" greater in height than the finished opening, until after entrances are installed. After guide rails are set and lined, the entrance frames shall be installed in perfect alignment with the guide rails. Finished walls will then be completed by others.

OPERATION:

44. (Selective Collective Automatic Pushbutton Operation-Without Attendant): Control of the elevator shall be automatic in operation by means of push buttons in the car numbered to correspond to floors served, for registering car stops and by "up-down" pushbuttons at each intermediate landing and "call" pushbuttons at terminal landings. The momentary pressing of one or more buttons shall dispatch the car to the designated landings in the order in which the landings are reached by the car, irrespective of the sequence in which the buttons are pressed. Each landing call shall be cancelled when answered. When the car is traveling in the up direction, it shall stop at all floors where "down" buttons only have been pressed, unless the stop for that floor has been registered by a car button, or unless the down call is at the highest floor for which any buttons have been pressed. Likewise, the pressing of an "up" button when the car is traveling in the down direction shall not intercept the travel unless the stop for that floor has been registered by a car button, or unless the up call is the lowest for which any button has been pressed.

45. When the car has responded to its highest or lowest stop, and stops are registered for the opposite direction, its travel shall reverse automatically and it shall then clear the calls registered for that direction.

46. Should both up and down calls be registered at an intermediate floor, only the call corresponding to the direction in which the car is traveling shall be cancelled upon the stopping of the car at the landing.

47. An adjustable time delay shall be provided so that after the car has stopped in response to a hall button, the entering passenger may register his car button before the car will reverse to answer calls in the opposite direction. The car station shall contain an emergency switch for stopping the car at any point in its travel. Opening of this switch shall not cancel registered calls; when the switch is closed, the car shall continue to answer calls that have been registered.

48. Car Station shall also contain a key operated toggle switch for the car light, a fan switch if a fan is used, and a "door open" button for stopping the closing motion of the doors and causing them to return automatically to their open position.

49. The buttons in the car and hall stations shall be of the light-up type which will be illuminated when the button is pressed indicating that a call has been registered for that landing.

CAR POSITION INDICATOR:

50. An electric position indicator shall be provided in each car. Indicator will consist of a finished face plate with numerals, behind each of which shall be a small shielded light bulb, so arranged that as the car travels through the hoistway its position shall be indicated by the illumination of the numeral corresponding to the landing at which the car is stopped or passing.

END OF SECTION

COMM. NO. 7057

PLUMBING
Division 15 * Section 15A

GENERAL:

1. Plumbing equipment and materials shall comply with and be installed in accordance with the local Plumbing Code.

2. The Contractor shall procure an pay for all necessary plumbing and sewer permit.

3. A certificate of inspection and approval shall be obtained from the local Plumbing Inspector and turned over to the Architect or the Owner before final acceptance of the work.

4. The Contractor shall be familiar with the existing work in place in the building and anticipate the conditions under which he will be obliged to operate. No allowance shall be made in this respect for any error or misinterpretation.

5. Scope: The work covered by this section of specifications consists of the following installations: (Use existing piping in place to the extent feasible.)

a. Soil, waste and vent piping and connections to the sewer.

b. Hot and cold water and gas piping.

c. Valves, traps, cleanout drains and hose bibs.

d. Roof flashing for vent piping.

e. Installation of all plumbing fixtures and accessories.

f. Installation of domestic hot water heater.

g. New roof drains and interior downspouts.

h. Storm drainage system for parking structure.

i. All excavation and backfill for plumbing and drainage lines.

MATERIALS:

6. Unless otherwise called for code requirements the following materials shall be used for plumbing lines:

7. Water service piping and piping above ground, below ground and under concrete floors shall be soft temper type K copper tubing. Copper tubing shall be installed without joints in or under concrete slabs.

8. Underground waste, soil and drainage lines shall be extra heavy cast iron soil pipe.

9. Above ground lines shall be extra heavy soil pipe, galvanized steel pipe or hard temper copper tubing.

10. Individual branch water supply piping to fixtures and soil, waste and vent line connections to fixtures shall have the minimum sizes as follows:

11. Hot and cold water piping 1/2 inch.

12. Water closet waste connection 3 inch by 4 inch.

13. Sink - 1 1/2 inches; lavatory - 1 1/4 inches.

14. Vent connections to watercloset - 2 inches; other vent connections - 1 1/4 inches.

CONSTRUCTION AND WORKMANSHIP:

15. All work shall be installed by experienced mechanics and according to the rules of the trade. The Contractor shall verify the field dimensions and install his items with necessary clearances for his work and work of other trades.

16. Excavation and backfill. The plumbing contractor shall do all excavating and backfilling for his work. No extra will be paid for rock excavation. Refer to Section 2B.

17. Excavate trenches for underground piping to required depth. After pipe lines have been tested and approved the trenches shall be backfilled and tamped.

18. Trenches shall be filled with clean earth, free of cinders, wood and debris. No piping shall be laid in cinders or corrosive soil unless the pipe has protective coating.

19. Piping shall be installed properly sloped and protected from freezing.

20. Pipe hangers and supports shall be of metal similar to that of piping.

21. Piping shall be installed without critical damage to the structural members. No notching, cutting or drilling over 2 inches shall be done without permission of the Architect.

22. All connections to risers and fixtures shall be provided so that the entire system can be drained at low point.

23. Hot water supply shall be provided to all fixtures except water closets.

24. Shutoff valves shall be provided to all water closets and to other fixtures as directed on plans or in the Description of Work.

25. Exterior sill faucets, frostproof type shall be provided at locations indicated on drawings.

26. If normal street water pressure exceeds 80 psi a pressure reducing valve shall be installed to reduce the water pressure to not more than 80 psi.

27. Cleanouts and floor drains shall be installed at all locations shown on plans.

28. Plumbing fixtures and accessories shall be of the manufacturer, type and model as specified below:

29. All fixtures shall be installed securely supported so that no strain is placed on the connected piping. If manufacturer's recommendations for installation are available, follow the directives.

30. Tests: The Contractor shall subject all supply and waste piping to pressure tests as prescribed by the local Plumbing Code, and obtain from the Plumbing Inspector acceptance of the installation.

PLUMBING FIXTURES:

31. Fixtures shall be as follows, based on Kohler manufacture, except where otherwise indicated (American Standard, Crane or Eljer fixtures; Coyne & Delaney or Watrous flush valves; Beneke or Bemis seats, may be used):

a. Water Closets: Kohler K-4282-ET Penryn elongated vitreous china full siphon jet water closet with 1-1/2" top supply and bolt covers; fitted with #110-FYVQ Sloan Royal flush valve with non-hold-open feature, and vandal proof trim, 1" chrome plated brass supply nipple and cast chrome plated escutcheon with set screw, Sperzell No. 80-EW/ch white open front and back seat, less cover, check hinge.

b. Lavatories: Kohler K-2201 size 18" round Brookline vitreous china lavatory, with front overflow concealed under anti-splash rim, with Mastic "J" bolts, slips and nuts fitted with K-7436-FL combination fitting with pop-up drain and vandal proof aerator, K-7606 3/8" supply to wall with stops and flexible risers, K-9000 1-1/4" cast brass P-trap with cleanout plug.

c. Urinals: Kohler K-5014-T Dexter china full siphon jet urinal with flushing rim and extended lip, top supply and 2" back outlet with chrome plated cap nuts; fitted with #180-YV Sloan Royal flush valve with non-hold-open feature vandal proof trim, 1" chrome plated brass supply nipple and cast chrome plated escutcheon with set screw.

d. Service Sink: Kohler K-6715 size 22" x 18" Bannon cast iron acid-resisting roll rim service sink with 9" integral back, wall hangers; fitted with K-8936 rim guard bolted to rim, K-8906 double combination faucet for hot and cold water, pail hook, hose end, loose key stops and vacuum breaker, K-6673 enameled inside adjustable P-trap standard tapped for 3" I.P. with cleanout strainer."

e. Water Heater: A. O. Smith, Model DRE-80, electric, rated at 36 KW, 208 volts, single phase, 60 cycle AC. and listed by Underwriters Laboratories, 10 yr. guarantee.

ROOF DRAINS:

Drainage specialties specified herein by "Series" numbers, are from Josam Mfg. Co's. Catalog K; intended for ease of identification and comparison. Other manufacturer's products approved as equal to those specified will be acceptable.

Provide and connect new roof drains to replace existing at locations indicated, and of size to match existing.

Drains shall be flat top type, galvanized iron, bottom outlet threaded, with removable round flat grate in square frame; top and grate shall be polished brass; Josam Series 4310 with integral expansion joint.

Drains shall be connected to inside downspouts of galvanized, threaded pipe of size to match existing. Anchor roof drains securely and make tight connections between inside downspouts and outlets of roof drains.

END OF SECTION

HEATING, VENTILATING AND AIR CONDITIONING
Division 15 * Section 15B

GENERAL REQUIREMENTS:

1. Work Under This Section: This section and the accompanying drawings cover furnishing all plant, labor, equipment, appliances and materials, and in performing all operations in connection with the installation of a complete air conditioning and heating system. City of Athens Code shall govern all work. This is an existing building.

PAINTING:

2. Painting except as otherwise specified, will be done under another section of these specifications, but Contractor shall leave all surfaces of work free of rust, dirt, and grease.

3. Contractor shall touch-up to match original finish any equipment scratched in shipment or installation. Paint all piping and hangers in Mechanical Room and to Tower grey; Expansion Tanks and Piping (red) and City Water (Green).

CUTTING, PATCHING, CARPENTRY AND MASONRY WORK:

4. Contractor shall do all cutting, patching, carpentry and masonry work required for the job progress. All patching shall conform to the surrounding surfaces in every respect, including apinting, and tiling. No cutting or patching shall be performed without first obtaining approval.

INSTRUCTIONS & DIAGRAMS:

5. Provide in the Mechanical Room, where directed and framed under glass, complete diagrammatic layouts of all control equipment and printed instructions indicating the function and operations of all components and systems.

6. Contractor shall prepare two (2) instruction manuals covering installation, operation, and maintenance of the equipment and piping system. Manuals shall include copy of control schematic and sequence and a diagrammatic piping layout showing valves, etc., involved in these operations and indicate the function and operations of all components. Manuals shall also contain one copy of all manufacturer's drawings, pamphlets, data, parts, lists, instructions and manual of equipment. One copy

shall be turned over to the Owner, one copy shall be placed in instruction box. The pamphlets and drawings are to be neatly bound in a plastic binder.

7. One copy of printed, bound manual with copy of manufacturer's drawings and instructions as specified above shall be placed in 14" x 14" x 6" deep #16 gauge metal cabinet with hinged cover and push button latch. Locate in Mechanical Room.

8. Contractor shall provide the services of a skilled technician to instruct the building operator in the proper operation and maintenance of all systems and equipment.

SHOP DRAWINGS:

9. Within six weeks after award of the contract, Contractor shall submit five copies of shop drawings in brochure form for approval. Each brochure shall contain one copy of all shop drawings. Shop drawings shall be submitted simultaneously, and none will be checked until all have been submitted. Shop drawings shall include manufacturer's recommendations for installation.

10. All literature shall clearly indicate the specified model number, dimension, arrangements, ratings and characteristics of the proposed equipment. Capacities and ratings shall be based on conditions indicated or specified herein. Any deviations from specified equipment shall be clearly noted in red.

11. Should any equipment furnished by Contractor differ radically from base items indicated or specified herein, and which may require added cost to other trades, it shall be the Contractor's responsibility to assume the extra cost involved.

12. Instruction manual and shop drawing manual shall be bound in a plastic binder, showing maintenance and operation recommendations. The name of the manual, project, Architect, Engineer and Contractor shall be placed on cover of each manual. Each manual shall contain a table of contents listing all items contained therein by number and name as listed herein. Each item shall be indexed with standard metal reinforced hole tab cover with item number and name printed on tab.

13. Shop drawings shall be submitted for all major items of equipment, including grilles, registers, diffusers, fans, electric unit heaters, electric duct heaters, hydronic unit, cooling tower, insulation, temperature

controls, boiler, specialties, Test and Balance Agency, expansion tank, pumps.

ELECTRICAL WORK:

14. Except as otherwise specified or noted, electrical equipment shall be as specified herein.

15. Motor controls, system controls, starters, pilot lights, push buttons, etc., shall be furnished by the Contractor complete as a part of the motor or apparatus which it operates. Electrical equipment shall be wired for the voltage, as shown on the Electrical Plans.

16. Motors shall be standard NEMA continuous duty type. Each motor shall have ample capacity to drive the equipment to which it is connected at its full load capacity without loading the motor beyond its nameplate ratings and shall have overload protection.

17. Starters shall be Allen-Bradley as specified herein. Starters for motors 1/3 HP and smaller shall be manual AB Bulletin 600; for 1/2 HP and larger, magnetic, AB Bulletin 709. Starters for motors with remote or automatic control shall be magnetic. Relays, interlocks, and auxiliary contacts, shall be provided as specified and required.

18. Motor controls shall be either "Hand-Off-Auto" switches AB Bulletin 800 or "On-Off" push buttons with one indicating light, AB Bulletin 800 "Hand-Off-Auto" switches shall be provided for automatically controlled apparatus.

19. Motor starters not an integral part of equipment shall be installed under Electrical Section. Fusible disconnects shall be provided under Electrical Section.

20. Electrical power wiring to fused disconnects, starters, motors and similar devices shall be provided under Electrical Section.

21. Contractor shall provide all system controls, line and low voltage control and interlock wiring, conduits, in accordance with materials and installation requirements of Electrical Section.

22. All starters, control devices, other than those located in Mechanical Rooms, Electrical Closets, and Storage Rooms, shall be flush mounted type.

23. Wiring diagrams shall be furnished by this Contractor

24. Equal products of Westinghouse, General Electric, Square D, Cuttler-Hammer, Furnas or Clark will be acceptable.

ISOLATION:

25. Contractor shall provide rail type, or individual vibration isolators for cooling tower, in accordance with recommendations of the Vibration Eliminator Company.

FLEXIBLE CONNECTIONS:

26. Provide flexible duct connection to all air handling units. Flexible connections shall be 20 oz. Neoprene coated glass fabric Neoflex as manufactured by Cain Manufacturing, Inc. Flexible connections shall not be less than 2" long and shall have metal collar frame at each end. Allow at least 1" slack in fabric to eliminate vibration transmission.

27. Equal Product - Ventglass.

INSULATION:

28. All exposed tower piping and drain piping and fittings shall be insulated with 1/2" thick Owens-Corning O-C Flexible Tubing foamed plastic insulation. Insulation butt joints shall be sealed with OC-500 adhesive. Where slip-on is not possible, the insulation shall be slit and applied to the pipe with longitudinal seams and butt joints sealed with OC-500 adhesive. All exposed pipe insulation shall be finished with two coats of rubber base finish.

29. All supply air ducts in concealed spaces shall be insulated with Owens-Corning 3/4 lb. density glass fiber insulation with .002 aluminum foil flame resistant vapor barrier. Insulation shall be applied with adhesive at one foot intervals and the materials shall be further held in place by use of soft annealed wire 9" o.c. Material shall be butted with joints taped with same material as facing. Insulation on underside of ductwork over 18" wide shall be further adhered by means of Graham welding ductpins spaced not more than 18" centers. Insulation shall be 1" thick. Omit insulation on lined duct.

30. All outside air, supply, and return air ducts in Mechanical Room shall be lined with 1" thick Owens-Corning 2 lb. density duct liner with Neoprene spray coat. Duct liner shall be applied by adhering the liner in a continuous

piece to clean, flat metal sheets with a rubber-based adhesive and forming the liner with the metal through the brake. Coated side of duct liner shall face the airstream. All exposed edges shall be pointed and coated with adhesive. Ducts over 18" in width or depth shall have the liner additionally secured with stud welding pins and clips. Metal clips shall be spaced on not over 12" centers each way. The ductwork dimensions indicated are clear inside dimensions. Increase duct sizes to accommodate duct liner. Where ducts are lined, other type of insulation will not be required.

31. Equal products: Johns Manville, Owens-Corning, Gustin Bacon, PPG, Armstrong, Insulcoustic, Foster, CSG.

LOW VELOCITY DUCT SYSTEM:

32. General: This section covers low velocity metal ductwork casings, housings, and related items. All ductwork shall be fabricated in accordance with the SMACNA Duct Manual.

33. Reference Standards: "Duct Manual" shall mean the 1969 edition of the "Duct Manual and Sheet Metal Construction for Ventilating & Air Conditioning Systems, Section I, Low Velocity Systems" as published by the Sheet Metal and Air Conditioning Contractors National Association.

NFPA-90A shall mean the 1969 edition "Installation of Air Conditioning and Ventilating Systems" as published by the National Fire Protection Association.

34. Sheet Metal Ductwork:

a. Fabrication: All ductwork shall be fabricated of galvanized steel in accordance with Table 1 and Plates 5 through 15 of the "Duct Manual".

b. Hangers: To be constructed in accordance with Plates 16 through 20 of the "Duct Manual".

c. Elbows - Radius: To be constructed in accordance with Plate 21 of the "Duct Manual".

d. Elbows - Vaned: Shall be double vaned constructions in accordance with Plate 22 of the "Duct Manual".

e. Tee Connections: To be constructed in accordance with Plate 26, Figure "B" of the "Duct Manual".

f. Dampers, Volume (Manual) - Provide manually operated volume control dampers for the balancing of the air handling systems. Dampers to be as shown on Plates 28 and 29 of the "Duct Manual" with an indicating device to lock damper in position for proper setting.

FIRE DAMPERS:

35. Provide NFPA 90A listed fire dampers where ducts pass through fire rated walls, floors and rated ceiling as required by NFPA and local code. Provide access door for each damper. Dampers shall have U.L. Label. (Location of Fire Dampers shown on drawings.)

PIPE, VALVES AND FITTINGS:

36. Unless otherwise noted or specified, pipe, valves and fittings for the various systems shall be as specified, herein.

37. All shut-off valves shall be gate valves 2" and smaller and shall be bronze and brass throughout with boxes, nuts and screwed bonnets, 150 lbs. operating pressure, rising stems. Valves shall have back seats for packing under pressure, gland followers and shall be individually tested. Valves shall be Jenkins Brothers Fig. 49U or 651A for screwed or flanged respectively, and Fig. 1242 for sweat.

38. Globe and check valve construction and sizes shall conform to that given above and shall be Jenkins Brothers Fig. 762A, 624, 750 and 613. Shut-off valves 2 1/2" and larger shall be Demco Butterfly type with EPT seat and aluminum-bronze disc, with 100% shut-off at 125 psig, fully field serviceable. Check valves 2 1/2" and larger shall be Mission Duo-Check.

39. Strainers shall be McAlear No. 539 bronze screwed 2" and smaller for 300 psi WWP, cast iron flanged 2 1/2" and larger for 250 WSP. Strainer perforations and materials shall be suitable for installed service. Provide each strainer with brass nipple and plugged gate valve for blow-down.

40. Welding fittings shall be Taylor Forge, Tube Turns or Midwest fittings of same material and classification as pipe. All welding shall be performed by a qualified welder in accordance with the standards of the American Welding Society. Use only welding type fittings and welding neck flanges, with the following exception: Contractor may join "small" branches into mains with intersections welding, instead of using welding type tee. "Small" shall mean

that the branch is at least two pipe sizes smaller than size of main it intersects (3/4" branch into 1 1/4" main 1" branch into 1 1/2" main, etc.). Use only "Weldolet" or "Threadolet" type welding fittings for intersection welding of branches to mains. Mitered welding ells will not be permitted. Use screwed fittings for coils.

41. Supply and return pipe shall be Schedule 40, welded black steel; fittings shall be welded type ASTM-A53-68 for 1" size and larger, screwed malleable iron 3/4" and smaller. Elbows shall be long radius type.

42. Provide valves on each side of each item of equipment, specialty, and elsewhere as required for proper maintenance of systems and equipment.

43. Equal products as approved of Walworth, Rockwell, Jenkins, Stockham, Hammond, Schade-Davis, Lunkenheimer, Nibco/Scott or Crane will be acceptable.

FLOOR, WALL & CEILING PLATES:

44. Provide chromium plated spun steel escutcheon plates with springs on all exposed lines through ceilings, floors, and walls.

PIPE SUPPORTS AND HANGERS:

45. All piping shall be supported by means of hanger rods and pipe hanger from floor or roof construction using supplementary steel and beam clamps. No piping shall be suspended from concrete slab unless slab is three or more inches in thickness.

46. Piping shall be supported from concrete with Grinnell Fig. 282 inserts. Piping and brackets shall be supported from hollow block construction using masonry drilled holes and toggle bolts.

47. Unless otherwise noted, hangers and clamps shall be Grinnell Fig. numbers as listed below:

a. Bare Steel Pipe - Fig. 260.
b. Insulated Water Pipe - Fig. 260 placed over insulation protection saddle.
c. Bare Copper Pipe - Fig. CT-97.
d. Riser Clamp for Steel or Cast Iron Pipe - Fig. 261.
e. Riser Clamp for Copper Pipe - Elcen Fog. 339 copper plated.
f. Insulated Water Pipe Supported From Wall - Elcen. Fig. 44 placed over insulation protection saddle.
g. Bare Pipe Supported From Wall - Elcen Fig. 44 placed over bare pipe.

48. Maximum spacing between pipe hangers shall be as follows:

a. Steel Pipe - Twelve Feet (12'0")
b. Copper Pipe Size 1 1/2" and Larger - ten feet (10')
c. Copper Pipe Smaller Than Size 1 1/2" - six feet (6'0")

49. At least one hanger shall occur within 2'0" from where change in direction takes place in the line. Where pipes extend down or up to other floors, pipe clamps shall be provided on each floor to support the pipe.

50. Pipe hangers shall be complete with rods and inserts, proportioned to the size of pipe to be supported.

51. Equal products: Fee & Mason, Elcen, Carpenter and Patterson, Grabler, Crane, F & S.

UNIONS:

52. Unions shall be iron body, ground joint, brass to iron seat up to 2 1/2" size inclusive, 3" and larger shall be flanged. Gasket shall be ring type.

53. No unions shall be placed in piping in a location that will be inaccessible after completion of the work. Unions shall be provided on each side of each item of equipment or specialties for removal and maintenance.

DRAIN PIPING SYSTEM:

54. Provide all drain piping and fittings from equipment as indicated.

55. Provide drain piping system for A.C. Units beginning at unit drip pans and extending to termination at indirect connection to plumbing system.

56. Provide drainage lines as indicated or required for various items of equipment, including cooling tower bleed, overflow and drain, air vent drains, boiler drains, etc. Terminate drains over nearest floor drain.

57. Drain piping shall be Type "L" copper pipe with wrought copper fittings. Each drain shall be trapped.

WATER SUPPLY PIPING SYSTEM:

58. Contractor shall make final water supply connections

as indicated or specified to cooling tower, hot water system, etc., complete with valves, float valves, piping as required. Water supply lines will be run to equipment areas under another section of the specifications.

GALVANIC PROTECTION:

59. Insulate joints between dissimilar metals with gasket and bolts with fiber ferrules and washers or steel insulating unions so there will be no contact between the metals.

PRESSURE GAUGES:

60. Pressure gauges shall be bourdon tube type with polished stainless steel case and bayonet ring. Replaceable cover glass shall have weatherproof gasket. Pointer shall be adjustable over the entire range. Dial shall be 4 1/2" diameter with red set hand. Accuracy shall be guaranteed to be within 1% of the full scale range. Gauges used for services exceeding 200°F shall be mounted on a type S-360 steel syphon. Gauges shall be installed with 25B snubber Ranges shall be 0 to 60 psig. Ashcroft 4 1/2" - 1020A Range.

61. Equal products: Marsh, Weksler, Moeller.

THERMOMETERS:

62. Thermometers shall be Bi-Metallic Dial type with polished stainless steel case, bayonet ring and stem. Replaceable cover glass shall have weather-proof gasket. Pointer shall be adjustable over the entire range. Dial shall be 5" diameter anti-parallax type. Stem length, unless otherwise required, shall be 4". Accuracy shall be guaranteed to be within 1% of the full scale range. Thermometers for uninsulated lines shall be equipped with type 39B4 brass separable socket. Those for insulated lines, tanks, etc., shall be equipped with extension neck type 394B brass separable socket. Ranges shall be equipped with extension neck type 394B brass separable socket. Ranges shall be 0 to 200°F temperatures. Ashcroft type 50-6360AHT back connected or 50-6260AHT bottom connected or 50-6060AHT every angle.

63. Equal products: Marsh, Weksler, Moeller, Trerice.

TEST WELLS:

64. Test wells shall be Ashcroft brass type 38B4BP for uninsulated lines or type 39B4BP with lagging extension for insulated lines. All test wells shall be suitable for use with thermometers specified and shall be furnished with brass plug and chain. Provide wells on inlet and outlet piping on each coil.

SPECIALTIES:

65. Provide the following specialties and accessories as indicated.

66. Pressure Regulating Valve: Provide, in water make-up lines to system, Armstrong RD50, 3/4" size pressure regulating and check valves. Set as directed. Equal products: Watts, Taco, B & G, or equal.

67. Pressure Relief Valves: Provide, in water make-up lines to systems and elsewhere as indicated, Thrush 3/4" size adjustable pressure relief valves. Set at 29 psig. Pipe each relief valve to floor drain. Equal products: Watts, Taco, Armstrong, B & G.

68. Pressure Relief Valve (On Boiler): McDonnell & Miller ASME BTU rated relief valve, or valves, of capacity equal to maximum boiler nozzle output in BTU per hour. Pipe discharges to floor drain. Equal products - Watts, Bell & Gossett, Thrush.

69. Continuous Air Elimination System: Provide American Tube Co. Air Purger fitting as indicated.

70. Balancing Cocks (Up to 1" size inclusive): Hammond screw-driver operated balancing, straightway fitting with male union and female thread. Equal products - Sarco, Hoffman.

71. Balancing Cocks (1 1/4" size and larger): Rockwell semi-steel standard trim, 114, suitable for 175 lbs. screwed ends 2" and smaller, 115 flanged 2 1/2" and larger. Valve pressure drop shall not exceed 8 equivalent feet of pipe. Equal products - Walsworth, Crane, Homestad Model 601 and 602

72. Strainers: Strainer 1 1/4" and smaller shall be McAlear No. 5395 bronze screwed 1 1/2" and larger, McAlear No. F-1 cast iron flanged Strainer baskets and perforations

for water service. Provide each strainer with brass nipple and plugged gate valve for blowdown. Equal products - Armstrong, Schade-Davis.

73. Automatic Air Vents: Maid-O-Mist No. 75 with 1/4" waste connection piped to floor drain or outside building with 1/4" copper tubing. Min. 150 lbs. operating pressures. Provide cut-off cock for air vent servicing. Equal products - Sarco, Bell & Gossett, Hoffman.

74. Automatic Air Vents on Unit Ventilators, Fan Coil Units: Maid-O-Mist No. 72 1/4" automatic hot water air valve. Provide cut-off pet cock in inlet connection to vent.

EXPANSION TANKS:

75. Tank shall be ASME approved and stamped for unfired pressure vessel service, 125 psig working pressure, complete with vinyl bladder type air chamber.

FANS

76. Provide fans of types, sizes, capacities, as indicated and specified.

77. Fans shall be the product of an AMCA certified air delivery and label.

78. Capacities, RPM, motor sizes, and top speed shall be substantially equal to those indicated and specified. Fan brake horsepower shall not exceed the specified by more than 5%.

79. Fans, motors, drives and controls, exposed to weather shall be weatherproof construction. Roof mounted fans shall have disconnect switch, and all fans 16" in diameter and over shall have firestats.

80. Fans shall be complete with guards, bird screens, automatic shutters, motorized dampers, firestats, as indicated and required.

81. Equal products as applicable: Acme, Alladin, American-Standard, Buffalo, Davidson, Penn, Trane, Greenheck, Ammerman, Exitaire, Breidert, Cook, Jenn-Air.

ELECTRIC UNIT HEATERS:

82. Unless otherwise indicated, provide electric unit heaters as manufactured by Chromalox of sizes, capacities, models, indicated.

83. Wall type unit heater shall be Model RSF UL approved heavy duty complete with heating element, fan, wall box, automatic thermostatic control, safety switch and 16 gauge louvered grille with color as selected. Equal Product: Electromode.

ELECTRIC DUCT HEATERS:

84. Provide, as indicated and specified, Electric Heaters, Inc. electric heaters of the heating capacities shown. Heaters shall be listed by Underwriters Laboratories Inc. and shall bear the appropriate UL Label.

85. All frame members terminal box covers, splice box and similar associated sheet metal parts shall be of heavy gauge, die formed steel with integral corrosion resisting coating. Assembly into a rigid structure shall be by means of spot welding or threaded fastenings. Heaters shall be flanged mounted. Provide access door in duct. Unit shall be accessible for servicing.

86. Heating banks shall be composed of individually wire wound heating elements having highest quality alloy coiled resistors. Each element shall have a ceramic insulator. Heating banks shall be connected for either single phase or 3-phase operation. Provide control transformer where control voltage exceeds 277 volts.

87. Each heater shall be equipped with a UL listed automatic reset snap-action limit control designed to protect the equipment from over heating from any cause. (Provide a McDonnel Miller Air Flow Switch.)

88. Each step shall have fused overcurrent protection factory mounted contactors, and manual reset thermal cut-out. All fuse blocks, contactors, terminal strips, control power transformer, shall be factory mounted and wired in an 18 gauge steel ventilated enclosure with hinged cover. Wiring diagram and UL Label shall be affixed to inside of cover. Maximum of 40 amps per step. Equal products: ESl, Indeeco, Chromalox, Brasch.

PUMPS:

89. Provide, where indicated, pumps as specified herein. Capacities shall be as indicated.

90. Floor mounted pumps shall be Armstrong single suction centrifugal.

91. The head delivery curve of each pump shall have a definitely rising characteristic from design delivery point to shut-off point and shall be capable of continuous operation under design conditions. Pumps shall be non-overloading at any point on head delivery curve. Pump speed shall not be over 1750 RPM. Equal Product - B & G.

COOLING TOWER:

92. Provide American Standard Electro-Hydronic Evaporative Condenser Model as indicated. Tower shall have capacity control.

93. Provide make-up section, supply, drain, overflow, needle valve bleed off, etc., as indicated and required.

94. Unit shall be installed in accordance with manufacturer's instructions.

95. Provide tower winterizing as indicated and specified complete controls, piping, valves, electric wire, etc.

96. Equal Products: Vilter Manufacturing Corp. B.A.C.

HYDRONIC UNITS:

97. Provide American Standard Model CHP Water Cooled Heat Pump with all accessories including a wall mounted heating and cooling thermostat with automatic changeover. Baked enamel finish, insulated drain pan, filters with special filter mounting (See detail).

GRILLES, REGISTERS, DIFFUSERS, ETC.:

98. Provide grilles, registers and diffusers as manufactured by Krueger Manufacturing Company. Refer to Architectural Section for type of ceiling.

99. Ceiling Supply Diffusers (Square): Series 1100, perforated face, with opposed blade volume control. Baked white enamel finish.

100. Sidewall Supply Registers: Series AL5787 with key operated opposed blade volume control. Removable core.

101 Sidewall Return Grilles: Series ALS5780H. Aluminum satin finish.

102. Ceiling Return Registers: Series EGC-5, 1/2" x 1/2" egg crate core.

103. Ceiling Return Grille: Series EGC-5, 1/2" x 1/2" egg crate core.

104. Ceiling Exhaust Registers: Series EGC-5, 1/2" x 1/2" egg crate aluminum core and opposed blade volume control.

105. Transfer Grilles: Series 1190, perforated face, core only. Baked white enamel finish.

106. Extractors: Provide Series EX88A Extractor for each supply register and diffuser. Extractor shall be adjustable thru grille or side of duct.

107. Equal products: Carnes, Tuttle & Bailey, Barber-Colman, Titus, Metal-Aire, Airguide, Grillemaster.

BOILER :

108. Furnish and install a complete Dewey Sheppard packaged electric boiler designed for constant use. The boiler shall meet all available ASME standards for boilers and pressure vessels. The boiler shall be National Board stamped and a manufacturer's data report shall accompany each unit indicating a maximum working pressure of 125 psig. Boiler shall be Underwriters' Laboratories listed.

109. The boiler shall be equipped with a single bulb indicating control with 7-step proportional sequencer. Control shall have a recycling relay. A high limit automatic reset aquastat shall be provided. The boiler shall be equipped with an "On-Off" control switch and pilot light, visible water level gauge, safety valve with a side outlet connection to provide relief at the rated maximum boiler pressure, spring loaded check valve and a pressure temperature gauge. Boiler shall be equipped with a low water cut-off control having a maximum pressure rating of 150 psi and an auxiliary probe type low water cut-off control. Spring loaded magnetic contactors will be furnished all fully wired into the boiler with fusing between the contactors and power terminal blocks. A separate control cabinet containing the control equipment shall be provided and shall be isolated with an air gap from the boiler to minimize thermal conduction to the control equipment.

110. The unit shall use a globe drain valve with all valves rated not less than 150 psi and shall have replaceable seats. The boiler vessel shall have at least one hand hole opening with 6" of the shell's lowest point with a minimum of 4" in diameter and shall have an outlet

drain location at the lowest point of the shell.

111. The boiler shall use industrial grade immersion heating elements brazed or welded into a flange with the flange and gasket mounted onto the boiler by means of a collar with stainless steel bolts used to mechanically fasten the element flange to the boiler. Elements shall be seamless copper of 0.457" diameter with sheath thickness of 0.030". At no time shall the bolts pass through the boiler shell into the water chamber.

112. The boiler shall be fully insulated with a minimum of 1" of fiberglas insulation and shall be equipped with a steel jacket having a minimum of 18 gauge steel with a baked enamel finish. The boiler unit shall have an access door with slotted lock and key which when open would expose electrical controls including heating elements. The boiler shall be completely wired, assembled and pretested.

113. Equal products - Patterson-Kelly, Chromalox.

TESTS, BALANCING AND ADJUSTMENT:

113. Before any covering is applied, piping system shall be tested and proved tight at 100 psig. The entire system shall be tested and proved tight under a pressure of 45 psi gauge. The system shall then be drained, and system and individual components cleaned and flushed until clean. Leaks shall be repaired by complete removal of pipe, fittings, valves and similar items, remaking joints and retesting.

114. Test and Balance

a. Air and Water systems shall be balanced and tested in accordance with the procedures and methods outlined in "National Standards for Field Measurement and Instrumentation" prepared by the Associated Air Balance Council, 2146 Sunset Blvd., Los Angeles, California. The use of a council member to perform the tests is recommenced, but not required. The following is a list of approved council members: Tab Services; Technical Enterprises; Atlantic Test and Balance.

b. Final air quantities dictate the final settings of fan speed and damper settings. Static pressure, fan RPM and brake horsepower shown on the plans are estimates of performance only. Final performance of the installed equipment is the Contractor's responsibility

and complete test data shall be submitted for approval prior to acceptance of the installation. Final results shall be typed and two copies submitted. All control functions shall be checked for compliance with specifications.

c. Test shall be made showing air quantities of all fans, intakes, supply outlets, exhaust inlets, main and branch ducts and exhaust or relief outlets. Test data shall include design RPM, S.P., B.H.P., velocity, CFM Manufacturers published area of outlets, K factors, etc. Test results shall show the actual measured quantities, how measured, instrument used and date of calibration of instrument.

d. Test shall be made on the water system only after the completion of all air systems tests. In addition, to complete nameplate data for all equipment, the following test shall be made on the water systems and all coils and heat transfer surfaces; Record all pump pressures and set pump heads based on manufacturers pump curve and submit copies of curves used for tests. Record operating volts and amps for each pump.

115. Operation and Instruction

a. After completion and prior to acceptance of the installation, Contractor shall submit the system to such operating tests as may be required by the Architect to demonstrate satisfactory functional and operating efficiency. Operating tests shall be conducted at such time as the Owner may direct. All instruments facilities and labor required to conduct the tests shall be provided by Contractor. Operating test shall cover a period of not less than two 8-hour days.

b. Operating tests shall be made separately during heating and cooling seasons of the first year of operation for proper setting and adjusting of valves, dampers, controls, under peak load conditions. Test shall be made for flow and temperature to demonstrate compliance with requirements of plans and specifications.

End of Section

COMM. NO. 7057

ELECTRICAL WORK
Division 16 * Section 16A

WORK DESCRIPTION:

1. This Section of the Specifications describes requirements pertaining to electrical work.

MANUFACTURERS:

2. Products of other manufacturers may be proposed for consideration under the conditions as set forth in General Conditions Section of these Specifications.

SHOP DRAWINGS:

3. Prepare and submit complete shop drawings for materials to be provided under this Section.

Shop drawings are required for:

a. Panelboards
b. Cuts of lighting system

STANDARDS FOR MATERIAL AND WORKMANSHIP:

4. All materials shall be new and shall conform with the standard of Underwriter's Laboratories, Inc., in each case where such a standard has been established for the particular type of material in question.

CODES, PERMITS AND INSPECTIONS:

5. The installation shall comply with the National Electrical Code and with the regulations of the Local Codes. Obtain all permits required by local authorities and deliver to Architect at final inspection, a certificate of occupancy or similar document indicating that this work has been provided in accordance with local ordinances.

COMPLETENESS OF WORK:

6. Provide all boxes, offsets, bends, devices, raceways, raceway supports, fittings, wiring, etc. as are required for the complete installation.

INTERFERENCES:

7. The drawings are diagrammatic unless dimensions are indicated. Reference shall be made to the Architectural, Structural, and Mechanical System plans. Coordinate work under this Section with other trades on the job so that interference between electrical work, piping, duct work, equipment, and architectural details will be avoided. All offsets in raceways, fittings, pull boxes, etc., required to properly install the work shall be furnished so as to take up minimum space and all such offsets, etc., required to accomplish this shall be provided at no additional expense to the Owner.

LOCATION OF OUTLETS:

8. All outlets for lighting, power, equipment, etc., not specifically dimensioned are located diagrammatically on the drawings. Lighting fixtures shall be located in accordance with reflected ceiling plans or tile pattern outlines. If neither of these are indicated, lighting fixtures shall be symmetrical within the space in which they are located. Reference shall be made to the architectural and mechanical plans and to the shop drawings of the equipment actually to be installed for the exact location of all outlets. Outlets shall be located so that they will be symmetrical with architectural details and power outlets shall be located so as to serve the equipment directly.

9. The location of any outlet may be moved ten feet, before being installed, without additional cost to the Owner.

ELECTRICAL SERVICE:

10. The electrical system parameters are indicated on the drawings. Make all necessary arrangements with the Power Supplier regarding coordination with their construction, scheduling of cut-ins and the obtaining of materials furnished by the Power Supplier.

11. All necessary arrangements with the power company involving details of construction, the obtaining of materials furnished by the power company and installed under this contract, and the connection point and times of cut-ins shall be made by the Contractor. No deviation in location of service components shall be made without the consent of the Architect.

EQUIPMENT WIRING:

12. Motors and controllers for mechanical equipment and associated control and safety devices will be furnished under other Sections unless noted on the drawings as provided in this Section. Under this Section, provide power wiring to and all control wiring indicated on the drawings for heaters and air condition units, provide wiring and receptacle outlets for or electrical connections to motors and other equipment. Install all controllers and control and safety devices indicated other than those installed in or on ductwork or piping, and provide power interlock and control wiring indicated. Other control and interlock wiring necessary for the operation of independent systems will be provided under other Sections of these Specifications.

GROUNDING:

13. The interior electrical systems neutrals, raceways, and electrical equipment frames shall be completely and effectively grounded as required by the N.E.C., local codes, as indicated and as specified.

14. Receptacles shall be grounded to their outlet boxes by means of a grounding conductor from the green terminal on the receptacle to special grounding screw or grounding clip. This conductor shall be sized in accordance with Table 250-95 of the N.E.C.

15. Lighting fixtures not attached directly to the raceway system (flexible conduit or chain hangers are not considered as a direct connection) shall be grounded by means of a conductor (the same size as the power conductors supplying the fixture) having green colored insulation attached securely to the fixture and to the outlet box from which the fixture is supplied. This conductor shall be an integral portion of the flexible power cable supplying the fixture, or installed in the flexible conduit supplying the fixture.

16. Ground continuity shall be maintained across sections of flexible conduit by means of a conductor having green colored insulation sized in accordance with Table 250-95 of the N.E.C. This conductor shall be terminated at each end by means of approved grounding connectors attached to fixed portions of the raceway system or equipment (attachment to box or equipment covers or cover mounting screws is unacceptable). In mechanical equipment rooms or equipment areas, grounding conductors #8 AWG and larger may be located on the exterior of the flexible conduit. Other grounding conductors shall be located inside the raceway. Grounding conductors located on the exterior of the conduit shall be taped to the conduit at 12 inch (maximum) intervals.

17. Grounding conductors within the building shall be insulated and installed in raceway. Grounding conductors outside the building shall be bare, directly buried two feet (minimum) below finished grade.

18. All buried connections in the grounding system and connections of grounding conductors to structural columns shall be by the Cadweld or Thermoweld process. Other connections shall be by means of UL approved clamp type connectors.

19. Where the electrical service neutral is grounded to the water system, all water meters shall be shunted by means of a conductor having current-carrying capacity equal to that required for the service.

20. The resistance between absolute ground and the service grounding system shall be measured by means of an ohm ground tester 48 hours (minimum) after rainfall or artificial watering. The resistance value shall be reported to the Architect as soon as practical after it has been installed.

RACEWAYS:

21. All wiring shall be installed in one of the types of metallic raceways listed. Rigid conduit and electrical metallic tubing shall have a sheradized or galvanized coating.

22. Rigid threaded steel conduit shall be provided for service, feeders, power circuits in excess of 250 volts above ground potential, and conduits underground or in slab in contact with ground. Electrical metallic tubing shall be provided for circuits above grade or slab for lighting branch circuits, for power and special systems circuits less than 150 volts above ground potential, and for telephone branch circuits.

23. Conduit 1 1/2" and smaller shall be supported at intervals not to exceed 8' - 0". Larger conduits shall be supported at intervals not to exceed 12' - 0".

24. Conduits shall be supported with hangers and clamps specifically manufactured for this purpose.

25. Where two or more conduits are installed adjacent, they shall be installed on gang hangers. Hangers shall be Kindorf, Power Strut, or Unistrut.

26. Rigid conduit joints shall be tightened until conduit ends butt. When conduit is cut, the inside edge shall be reamed smooth and all cutting residue removed. During construction all necessary precautions shall be taken to keep interior of installed conduit free from foreign material.

27. Where conduits enter boxes, troughs, or equipment enclosures other than those provided with threaded hubs, a standard locknut shall be used on the outside of the enclosure and a locknut and bushing on the inside of the enclosure. All conduits terminating without entering boxes or fittings shall do so in bushings.

28. Minimum conduit size shall be 1/2 inch for power and lighting wiring and 3/4 inch for telephone and television antenna system wiring.

29. A No. 16 galvanized fish wire shall be installed in all empty conduits.

30. Flexible conduit runs shall be limited to 24 inches in length except where indicated on the drawings or specified to be longer for a particular application.

31. Flexible conduit to recessed lighting fixtures shall be 6' - 0" in length.

32. Conduits supplying motor from above shall be securely attached to the overhead structure and a vertical run installed terminating in a floor flange attached to the floor or foundation on which the motor is mounted. This vertical run shall pass approximately 18 inches from the motor terminal box and shall be located so that it will not interfere with shifting or servicing the motor or associated equipment. In this vertical run, at the elevation of the motor terminal box, install a "TB" condulet one size larger than the conduit and install flexible conduit to the motor terminal box. Flexible conduit shall be long enough to allow for motor alignment in the case of direct drive equipment and for full motor shifting in the case of belt driven equipment. If the motor or the enclosure of equipment housing the motor is less than three feet from the disconnecting switch "in sight from the motor location", wiring in flexible conduit shall be provided directly between the motor and the switch.

33. Connections to control and interlock devices subject to vibration or movement shall be as indicated above for motors.

34. Flexible metallic conduit connections to motors and control devices in any location and for all uses in wet locations shall be galvanized and shall have a moisture- and oil-proof PVC or neoprene jacket, and fittings shall be Thomas and Betts liquid-tight connectors with insulated throats.

35. E.M.T. fittings shall be malleable iron or galvanized steel, compression type with insulated throats, as manufactured by Thomas and Betts Company, Inc.; Raco Division of All Steel Equipment, Inc.; Appleton Electric Company, Inc.; or Steel City Division of Midland-Ross Corporation.

36. Bushings 1 1/4" and larger shall be malleable iron or galvanized steel with insulated throats. Bushings 1" and smaller shall be plastic. Bushings shall be as manufactured by Thomas and Betts Company, Inc.; Raco Division of All Steel Equipment, Inc.; Appleton Electric Company; or Steel City Division of Midland-Ross Corporation.

37. Condulet-type fittings shall be zinc-coated manufactured by Crouse-Hinds, Appleton, or Pyle National Company. Condulet type fittings for raceways smaller than 1 1/2 inch shall be one size larger than the raceway and of the "Obround" series; for raceways 1 1/2 inch and larger, of the "Mogul" series.

38. Conduits installed below building ground floor slab or below grade shall have a minimum of 24 inches cover and shall be protected from corrosion by one of the following methods:

a. Coated with Bitumastic #50, Roscote #612XM, or Lion Oil Company mastic. Coating shall be 1/32" thick (minimum).

b. Wrapped with Minnesota Mining and Manufacturing Company Scotch Wrap No. 50.

c. Concrete encased.

39. The Architect shall be notified two days before directly buried conduit is covered.

40. Conduits 1 1/4" trade size and smaller indicated below floor shall be installed in the floor slabs, as near the center of the slab as practical and located so as to avoid conflict with reinforcing steel. Large conduits shall be installed below the floor slabs.

41. Expansion fittings shall be provided with bonding jumpers and shall be as manufactured by the O.Z. Electrical Manufacturing Company. Expansion joint fittings shall be provided at each point where conduits cross expansion joints and conduit is rigidly attached to structure on both sides of joint. Where there is a 45 degree or greater bend and five feet of unconfined conduit on one side of the joint, the fittings may be omitted.

42. Conduits which bridge vibration isolators or flexible joints in duct work shall do so by means of an 18 inch length of moisture- and oil-proof flexible conduit.

43. All conduit runs which extend from the interior to the exterior of the building or from refrigerated to non-refrigerated spaces shall be sealed to prevent the circulation of air. This shall be done by stuffing the conduit end with duct sealing compound where the conduit run terminates inside the building or non-refrigerated area.

44. Exposed raceway shall be parallel or perpendicular to structural members or architectural features.

45. Surface metal raceway multi-outlet assembly shall be Wiremold Company Plugmold #20GB Series with outlets on 30 inch centers.

SHEET METAL ENCLOSURES:

46. Wireways, auxiliary gutters, wiring troughs, cabinets, and boxes shall be galvanized and shall be supported from building structure or back-up board independent of raceways.

OUTLETS:

47. Where more than one device is shown in a location and potential between conductors within box is less than 300 volts, they shall be gang mounted in a box of appropriate size. Switches indicated to be in same location and having a potential in excess of 300 volts between units shall be mounted in individual boxes and covered with individual plates.

48. Recessed outlet boxes in finished areas for switches, receptacles and telephones shall be no smaller than 4 inch square by 1 1/2 inch deep with raised covers of height and number of gangs for the particular application.

Boxes installed for devices in masonry walls in dry locations shall have covers of the square cornered type designed for use in tile and marble walls. Receptacle outlets in brick walls shall be installed with the long dimension horizontal. All others shall be installed with long dimension vertical.

49. Junction boxes shall be sized as required by the number of conductors contained but shall be no smaller than 4 inches square by 1 1/2 inches deep.

50. Lighting fixture outlets shall be provided with suitable covers to receive fixture to be installed thereon.

51. Cast boxes with gasketed covers shall be used in wet locations. Galvanized steel boxes and covers shall be used in dry locations.

52. Mounting heights indicated for outlets are from finished floor to center of outlet, except that outlet heights in masonry walls shall be varied such that the top or bottom of the device cover plate will align with the top or bottom of a masonry unit. Other similar devices within a room shall be at the same height as those in the masonry wall.

53. Floor boxes shall be Steel City No. 98 Series. Boxes shall be set in floor with their tops flush with the finished floor and where two or more occur in an area aligned parallel to walls. Service fittings shall be Steel City No. SFL-10 for telephone and No. SFH-40 with 125V, 15A, duplex receptacle for power.

CONDUCTORS:

54. Conductors shall be copper, shall conform to ASTM Specifications as to conductivity and shall be free from kinks and defects when installed.

54.1 Min. conductor size for light and power wiring shall be #12 A.W.G.

55. Conductors #8 and larger shall be stranded.

56. Conductors shall be Type THW, except where code requires special conductor types as in continuous rows of fluorescent lighting fixtures.

57. Splices and taps in conductors sizes #14 to #10 shall be made with connectors of one of the following types:

a. Minnesota Mining and Manufacturing "Scotch Lock" with factory insulation or with field-applied 3M #33 or #88 Bishop "Bi-Seal" or Permacel "#29" tape or field-applied plastic caps.

b. Thomas and Betts "Piggies."

c. Ideal "Python-Gryp" nylon insulated connectors.

d. Buchanan "B-Caps."

58. Splices and taps in sizes #8 through #2/0 are to be made with "split bolt" connectors and sizes larger than #2/0 are to be made with Burndy "Hilugs" or "Hilinks." Splices and taps in conductor #8 and larger shall be insulated equal to that of adjoining conductor with one of the plastic tapes listed above.

59. Branch circuit conductors shall be color coded as follows:

All grounding conductors - green

208Y/120 volt system

Phase A	black
Phase B	red
Phase C	blue
Neutral	white

60. Feeder conductors shall have end taped four laps, two inches wide with colored plastic tape denoting the same color code as specified for branch circuits.

PANELBOARDS:

61. Panelboards shall be of the types, sizes, and in the locations indicated on the drawings and in the PANEL SCHEDULE. Doors of panelboards shall have a flush lock and latch with all locks keyed alike. Double panelboards shall have both sections of equal size, shall have full rating bus in both sections and shall have sections interconnected with conductors the same size as those supplying the panel.

62. Typewritten directory cards shall be provided in all panelboards.

63. Panelboards shall be installed with tops of cabinets 6' - 0" above the floor, except when cabinet heights exceed 5' - 0", the bottom of the cabinet shall be 1' - 0" above the floor.

64. Integral construction, common trip breakers shall be provided where two and three pole units are scheduled. (Single pole units with handle ties are not considered multi-pole units.)

65. Circuit breaker panelboards shall be:

a. General Electric Company - Type NLAB, NHB, NAB, or CCB.

b. Westinghouse Electric Corporation - Type NQC, NHIB, NDP, NHDP, or CDP.

c. I.T.E. Circuit Breaker Company - Type NLAB, NHB, NDP, NHDP, or CB.

d. Federal Pacific Electric Company - Type NBLP, NHIB, NHDP, or CDP.

e. Square D. Company - Type NQOB, NYIB, NAIB, or ML.

66. Switch and fuse panelboards shall be:

a. General Electric Company - Type QMR.

b. Westinghouse Electric Corporation - Type FDP.

c. I.T.E. Circuit Breaker Company - Vacu-Break.

d. Federal Pacific Electric Company - Type QMOB.

e. Square D. Company - Type QMB.

SAFETY SWITCHES AND DISCONNECTING SWITCHES:

67. Safety and disconnecting switches shall meet Federal Specification W-S-865c for Heavy Duty and shall be of enclosure type and rating and fused as indicated on the drawings. Disconnecting switches shall not have fuse gaps.

FUSES:

68. Provide fuses in all fuse gaps. The types and sizes are on the drawings or scheduled. Furnish one set of three spare fuses for each type and size fuse indicated.

69. At a conspicuous location inside each fused switch, provide a label indicating the type and maximum fuse size. The maximum fuse size shall be the size indicated.

WIRING DEVICES:

70. Wiring devices shall be one of the following:

	Harvey Hubbell Inc.	Bryant Electric Co.	Arrow Hart & Hegeman Elec. Co.	Pass & Seymour Inc.	Slater
Duplex Recpt., 125V,15A,2P,3W	5252	5252	5252	5252	5252
Single Recpt., 250V,50A,3P,3W	7962	9306	7985	3855	
Switches, 1P, 3-Way, 4-Way, 277V, 20A	1220 Series	4900 Series	1990 Series	20AC Series	720 Series

LIGHTING FIXTURES:

71. Provide all lighting fixtures indicated or specified. The type required is indicated in the Fixture Schedule.

LAMPS:

72. The Contractor shall furnish and install lamps, of the number and type scheduled, in all fixtures. Lamps shall be those manufactured by the Sylvania Company, General Electric Company, or Westinghouse Electric Corporation. All metallic additive lamps shall emit the same color.

BACK-UP BOARDS:

73. Where back-up boards are called for on the drawings, the Contractor shall install a panel of five ply, 3/4 inch thick softwood face plywood with one side finished. Panel shall be securely attached to the wall or metal frame.

MARKING:

74. The Contractor shall identify each individually mounted circuit breaker, motor controller, relay, contactor, safety switch, transformer, etc., neatly labeling thereon the name of the machine or device controlled. Labels shall be laminated plastic, black with white engraving, riveted to cabinets or covers.

75. All junction boxes shall be labeled with the voltage contained therein. Labels shall be "208Y/120 volts." Labeling shall be by means of pressure-sensitive metal strips adhered to the junction box covers.

PAINTING:

76. Ungalvanized troughs, metal frames and support racks and wooden surfaces required under this Section shall be painted. Paint shall be applied to back-up boards before switches, troughs, devices, etc. are installed.

INSTRUCTIONS:

77. Near the completion of this work the Contractor shall instruct a representative of the Owner with the location and function of devices and equipment installed under this Section. The Contractor shall prepare a booklet containing certificates or letters of warranty or guarantee, descriptions, parts lists, maintenance recommendations, etc., and deliver it to the Owner's representative upon completion of the work. This booklet shall include information on all the items indicated in paragraph No. 3 titled shop drawings.

TESTS:

78. A full scale working test, with all lights, equipment, machines and appliances in operation, shall be made, and electrical systems proven satisfactory for operation and free from defects. Provide necessary instruments for tests.

CASH ALLOWANCES:

79. The Contractor shall allow an allowance of $800.00 per every chandelier indicated on the plan. This should cover the actual material cost of the fixture, taxes and transportation and shall not include subcontractor and general contractors overhead and profit. The general contractor shall include the cost of installation for these fixtures in the base bid.

TELEPHONE (EMPTY) CONDUIT SYSTEM:

80. Provide telephone conduit system for telephone company's wiring as indicated and specified herein.

81. Conform to regulations of telephone company; obtain any necessary permits, certificates if required.

82. Install feeder conduit of size required by telephone company, underground from location indicated; terminate in main distributing terminal cabinet location where shown. Excavate for entrance conduit, not less than 24" deep; backfill and restore surfaces disturbed by excavation.

83. Provide opening in foundation wall for conduit entry; check size and location with telephone company; make watertight seal. Underground conduit shall be galvanized steel, encased in concrete of 2" min. thickness.

84. From main distributing terminal cabinet extend conduits to strip boxes, thence to outlet boxes. Conduit shall be galvanized steel of sizes indicated.

85. Conduit bends shall have minimum radii of 12" for 3/4" and 1", 15" for 1-1/4"; 18" for 1-1/2"; 24" for 2"; 30" for 2-1/2"; and 36" for 3".

86. Cabinet shall be 14 gauge steel of type and size as indicated, with door, combination lock and catch.

87. Strip boxes shall be 14 gauge galvanized steel with bushed openings in side or as required by telephone company. Identify each strip box with label marked "Telephone".

88. Outlet boxes shall be galvanized steel, 4" square, depth sufficient to receive conduit, flush type. Outlet box covers shall be brass .06" min. satin finish. Provide floor boxes projecting above floor where floor outlets are indicated.

89. Leave bare galvanized pull wire in conduits for telephone company to pull telephone wires; use 12 ga. pull wire in main underground feeder; 14 ga. pull wire in other conduit runs.

SOUND SYSTEM WIRING & SPEAKERS:

90. Provide speakers and wiring for sound system. Central sound system equipment will be furnished by Owner and installed in location shown on drawings.

91. From central sound equipment location provide speaker wiring to locations shown. Wiring shall be 2-#14 insulated conductors in 1/2 in. galvanized steel conduit.

92. Speakers shall be 8" diameter, flush mounted, ceiling type, rated at 6 watts, 8 ohms impedance. Submit manufacturers catalog data and cuts for Architects approval.

ALLOWANCE FOR BANK EQUIPMENT WIRING:

93. The Contractor shall include in the Base Bid proposal the sum of Two Thousand Dollars ($2,000.00) for cost of installation of electrical wiring and outlets not shown on drawings but required by Bank Equipment supplier.

94. The cost of labor, material, and overhead and profit for such additional wiring as may be required by Bank Equipment supplier shall be charged against this allowance, when authorized by a Change Order.

95. Should this cost exceed the amount of the allowance, the Contractor shall receive the difference as an extra; should the cost be less than the allowance, the final contract price will be reduced by the amount of the difference.

END OF SECTION

ADDENDUM NO. 1
Dated: April 12, 1972

Alterations & Additions to Building for
FIRST AMERICAN BANK AND TRUST COMPANY
Athens, Georgia

Heery and Heery Architects & Engineers

* * * * * *

1. GENERAL
a. This addendum shall supplement, amend and become a part of the bidding documents bearing the title of this addendum.

CHANGES TO SPECIFICATIONS

2. SECTION 3A - CONCRETE & CEMENT FINISH
a. Para. 66 Concrete Traffic Surface: Change 28 day compressive strength of concrete from 2000 PSI to 3000 PSI. Change slab thickness from 2" thick to 4" thick. Reinforcing shall remain as specified.

3. SECTION 5A - MISCELLANEOUS & ORNAMENTAL METAL
a. Add the following new paragraphs to Section 5A:

"CORNER ANGLES

23. Corner angles shall be 4" x 4" x 1/4", installed in each of the four corners of elevator hatchway and extending full height from elevator pit floor to underside of penthouse roof slab.

24. Furnish angles in 10 ft. lengths, or less, and provide suitable strap anchors for building into masonry joints. Space anchors approximately 4 feet on centers and staggered on alternate legs of angle. Set angles plumb and securely build into masonry walls of hatchway.

PRE-FAB STEEL CULVERT

25. Provide pre-fabricated corrugated sheet steel culvert, 48 inch diameter with 30 inch diameter branches as manufactured by Republic Steel Company. Culvert shall be made in accordance with details to be furnished by bank equipment supplier.

26. Install culvert to provide access tunnel to remote teller unit locations as shown on Drawing No. S-1 and in accordance with drawings and details to be furnished by bank equipment supplier.

ACCESS DOOR TO CULVERT

27. Provide a 21 by 21 inch access door and frame for prefab culvert specified above. Construct door of 1/4 inch thick checkered steel plate; provide hinges, lift handle and suitable locking device and lock. Construct frame and door in manner to make door watertight. Furnish suitable anchors for building-in frame in concrete slab."

4.. DIVISION 7, SECTION 7D, CAULKING
a. Delete paragraph 3 in its entirety and substitute in lieu thereof:

3. Backing shall be as recommended by the sealant manufacturer. Primer shall be as recommended by the sealant manufacturer.

5. The following named manufacturers are acceptable subject to the terms of the Contract Documents.

Specification Section	Manufacturer
5A	Nelco Metalcraft
5A	Baartol Company
5A	Concord Industries, Inc.
10B	Knickerbocker Steel Partition Company, Inc.
14A	Southeastern Elevator Co.
16A	Zinsco Panel Boards

6. Changes to the Drawings:

A3, A4, A7: Areaway on south side of existing building: See attached supplementary drawing.

S-1: Detail of Type I footing (Typical) - The 16" ϕ rolled 12 ga. sheet shall be galvanized steel.

S-1: Due to recent sub-surface investigation, it will not be necessary for footings to bear on rock. Investigations indicate no rock excavation will be required in this job. Delete Paragraph 2, Section 2B in its entirety. Delete the footing schedule shown on Sheet S-1 and substitute in lieu thereof the attached footing schedule.

End of Addendum

ADDENDUM NO. 2
Dated: April 17, 1972

Alterations & Additions to Building for
FIRST AMERICAN BANK AND TRUST COMPANY
Athens, Georgia

Heery and Heery Architects & Engineers

* * * * * * *

1. GENERAL
   a. This addendum shall supplement, amend and become a part of the bidding documents bearing the title of this addendum.

   b. This addendum confirms telegram dated April 17, 1972, sent to all bidders.

CHANGES TO THE DRAWINGS

2. DRAWING A-9: Details of New Main Entrance Vestibules, delete Alcoa Aluminum members #4347, #70424, #6801 and #3514. Substitute in lieu thereof white pine wood trim of same profile and dimensions.

End of Addendum

PRELIMINARY PUNCH LIST BY OWNER

I. PARKING DECK AREA

A. Georgian Hotel

1. Clean mud off brick ✓
2. Wash windows
3. Remove bench mark off brick wall ✓
4. Remove plywood off third window ✓
5. Replace cap blocks on their retaining wall ✓
6. Repair cap blocks that are loose. ✓

B. East Wall and Side Parking Deck

1. Clean mud off concrete
2. Repair concrete that is chipped
3. Clean mud off top of retaining wall to lower area to prevent streaking when raining on newly painted surface
4. Clean concrete off post on side next to Hancock

C. North Wall - Parking and Drive-in Deck

1. Correct rust streaks on upper level retaining wall
2. Repair curb around 8" T. C. drain to street
3. Take sharp edge off parking deck entrances with concrete or asphalt.
4. Gravel in tree well

D. South Wall Area

1. Will concrete color change be acceptable
2. Retaining wall will require week hole drains
3. Is construction joint between retaining wall and drive-in entrance acceptable.

E. Lower Level Deck

1. Check on floors for tolerance according to specifications
2. How will we get rid of water accumulating on flat area
3. Clean lower level of dust and mud

Owner

Diebold

4. Change lights or protect neon strips
5. Finish curbs on island near east wall
6. Weld caps on pipes on parking island
7. Clean paint off brick of drive-in window room
8. Finish brick under drive-in receptacle
9. Cap or complete junction box over door to drive-in room
10. Paint door to drive-in room
11. Finish trim on door to utility room
12. Clean excess concrete off curb area next to south wall downspout
13. Crack in concrete not repaired on southwest wall of lower area
14. Parking lanes?
15. Cut insulation off post next to floor that is exposed
16. Pitch pocket around A/C tower supply and return pipe

F. Upper Level Parking Deck
1. Is streaked application of curing compound acceptable?
2. Clean Floor of upper level parking
3. Parking lines

II. MAIN BUILDING

A. Roof
1. Check with Bailey on last coat of roofing sealer. It appears we have no wear surface to walk on. Present one is sticky and does not appear to have full coverage. Check with Bailey on changing wording of final statement
2. Provide latch on access door to elevator shaft and paint wood surface
3. Waterproof brick in vent shaft on roof
4. Remove excess blocks and construction material from roof.
5. Remove 2 x 4 nailed to brick vent shaft
6. Is it required that metal hoods over vents be painted? They are now rusting and need paint.

B. West Elevation (City Hall Side)
1. Clean tar (under conference room) rust (entrance post)and dirt off limestone
2. Clean granite steps
3. Clean brick - remove sealer
4. Paint where awning hooks were removed from windows
5. Mud on brick post

6. Paint on brick under director's room window
7. Wash windows and scrape paint off glass
8. Lamp hanging fixtures
9. Paint ceiling of entrance area
10. Are we going to paint hanging fixture?

C. South Elevation (Washington Street Side)
1. Clean limestone
2. Paint rail to emergency exit
3. Clean mud off concrete adjacent to cooling tower
4. Clean cooling tower brick
5. Paint fire escape
6. Paint back part of windows (exposed when raised)
7. Finish stucco and clean stairway to emergency exit

D. East Elevation (Georgian Hotel Side)
1. Paint Fresh air intake
2. Paint back side of windows
3. Clean limestone
4. Fix hole on left side of back entrance
5. Make decision on whether old pair of doors can be used satisfactorily
6. Brick under after hour depository
7. Paint metal plates - Rear outside lights

E. North Elevation
1. Repair entrance fixture lights - Paint and Globe
2. Clean Windows
3. Paint sprinkler system pipe and alarm
4. Clean sidewalks
5. Clean and replace venetian blinds on stairwell and bathrooms
6. Unstop drain in window well next to entrance
7. Clean granite steps

III. MAIN BUILDING - LOWER LEVEL

Room #1 - Small Bookkeeping Office
- (a) Telephone Plate
- (b) Clean lower part of door
- (c) Door stops

Room #2 - Small Bookkeeping
- (a) Telephone Plate
- (b) Door stops

Room #3 - Small Bookkeeping
- (a) Telephone Plate
- (b) Door stops
- (c) Glue on door

Room #4 - Small Bookkeeping
- (a) Telephone plate
- (b) Door stops

Room #5 - Water Meter Room
- (a) Light bulb

Room #6 - Ladies Toilet
- (a) Replace ceiling tile
- (b) Toilet Seats
- (c) General cleanup
- (d) Undercut door for air conditioning

Room #7 - Ladies Toilet Entrance Hall
- (a) Paint Cove Base Black to wall covering line

Room #8 - Mens Toilet
- (a) Undercut door for air conditioning ventilation
- (b) Replace ceiling tiles
- (c) General cleanup
- (d) Toilet Seats
- (e) Repair area around heater

Room #9 - Mens Toilet Hall

(a) Undercut doors

(b) Replace ceiling

Room #10 - Lower Hall (Beside small offices)

(a) Replace dirty ceiling tile

(b) Varnish streakes on paint of stairway

(c) Repair or paint moulding on North wall next to old carrier bathroom entrance

(d) Stairway post needs paint where scarred

Old Toilet Area

(a) General cleanup

(b) Clean windows

(c) Remove loose pipe over shower

(d) Repair around heater

(e) Glass in door loose

Room #11 - Lower elevator entrance

(a) Does light fixture in ceiling tile have proper support on ceiling tiles

Room #12 - Employee Lounge

(a) Replace ceiling tile

(b) Black spot on carpet

(c) Place kitchen unit

OWNER (d) We will need water cooler on lower area

(e) Clean ceiling light fixture

Room #13 - East Entrance Hall from Drive-in Area

(a) Paint 6" Drain Line

(b) Wall covering loose on mechanical room wall

(c) Mechanical room door needs cleaning or repainting

Room #14 -

A. Mechanical room

(1) Stop sink not installed

(a) A. C. drain not hooked up

B. Telephone Room

C. Elevator Control Room
(1) Clean window sill - sweep floor

Room #15 - Vault and Equipment Room area

A. Vault
(1) Paint Wall at ceiling level same color as wall
(2) Fix around wall outlets and paint
(3) Need light switch plate

B. Equipment and Mail Room
(1) Repair around wall receptacles
(2) Telephone plates
(3) Check wall for dirt on paint area

Room #16 - Proof Room
(a) Floor cleanup
(b) Clean light fixture (ceiling)
(c) Paint wall where color bleeding exist - finish paint around window well
(d) Finish door hardware (no receiver)

Room #17 - Bookkeeping area
(a) Replace tile in ceiling
(b) Provide plate over sewer clean-out on south wall
Owner (c) Make vinyl tape to indicate sewer cleanout
(d) Telephone plates
(e) Few spots on carpet
(f) Clean ceiling fixture covers
(g) Bubbles in wall covering on post areas

Room #18 - Entrance Room - Electric

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A201

General Conditions of the Contract for Construction

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES; CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS MODIFICATION

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ARTICLE 1

CONTRACT DOCUMENTS

1.1 DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement, the Conditions of the Contract (General, Supplementary and other Conditions), the Drawings, the Specifications, all Addenda issued prior to execution of the Contract, and all Modifications thereto. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a written interpretation issued by the Architect pursuant to Subparagraph 1.2.5, or (4) a written order for a minor change in the Work issued by the Architect pursuant to Paragraph 12.3. A Modification may be made only after execution of the Contract.

1.1.2 THE CONTRACT

The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral, including the bidding documents. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1.

1.1.3 THE WORK

The term Work includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.4 THE PROJECT

The Project is the total construction designed by the Architect of which the Work performed under the Contract Documents may be the whole or a part.

1.2 EXECUTION, CORRELATION, INTENT AND INTERPRETATIONS

1.2.1 The Contract Documents shall be signed in not less than triplicate by the Owner and Contractor. If either the Owner or the Contractor or both do not sign the Conditions of the Contract, Drawings, Specifications, or any of the other Contract Documents, the Architect shall identify them.

1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

1.2.3 The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The intention of the Documents is to include all labor, materials, equipment and other items as provided in Subparagraph 4.4.1 necessary for the proper execution and completion of the Work. It is not intended that Work not covered under any heading, section, branch, class or trade of the Specifications shall be supplied unless it is required elsewhere in the Contract Documents or is reasonably inferable therefrom as being necessary to produce the intended results. Words which have well-known technical or trade meanings are used herein in accordance with such recognized meanings.

1.2.4 The organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.2.5 Written interpretations necessary for the proper execution or progress of the Work, in the form of drawings or otherwise, will be issued with reasonable promptness by the Architect and in accordance with any schedule agreed upon. Either party to the Contract may make written request to the Architect for such interpretations. Such interpretations shall be consistent with and reasonably inferable from the Contract Documents, and may be effected by Field Order.

1.3 COPIES FURNISHED AND OWNERSHIP

1.3.1 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, all copies of Drawings and Specifications reasonably necessary for the execution of the Work.

1.3.2 All Drawings, Specifications and copies thereof furnished by the Architect are and shall remain his property. They are not to be used on any other project, and, with the exception of one contract set for each party to the Contract, are to be returned to the Architect on request at the completion of the Work.

ARTICLE 2

ARCHITECT

2.1 DEFINITION

2.1.1 The Architect is the person or organization licensed to practice architecture and identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Architect means the Architect or his authorized representative.

2.1.2 Nothing contained in the Contract Documents shall create any contractual relationship between the Architect and the Contractor.

2.2 ADMINISTRATION OF THE CONTRACT

2.2.1 The Architect will provide general Administration of the Construction Contract, including performance of the functions hereinafter described.

2.2.2 The Architect will be the Owner's representative during construction and until final payment. The Architect will have authority to act on behalf of the Owner to the extent provided in the Contract Documents, unless otherwise modified by written instrument which will be shown to the Contractor. The Architect will advise and consult with the Owner, and all of the Owner's instructions to the Contractor shall be issued through the Architect.

2.2.3 The Architect shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Architect may perform his functions under the Contract Documents.

2.2.4 The Architect will make periodic visits to the site to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of his on-site observations as an architect, he will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor. The Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

2.2.5 Based on such observations and the Contractor's Applications for Payment, the Architect will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in Paragraph 9.4.

2.2.6 The Architect will be, in the first instance, the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by both the Owner and Contractor. The Architect will, within a reasonable time, render such interpretations as he may deem necessary for the proper execution or progress of the Work.

2.2.7 Claims, disputes and other matters in question between the Contractor and the Owner relating to the execution or progress of the Work or the interpretation of the Contract Documents shall be referred initially to the Architect for decision which he will render in writing within a reasonable time.

2.2.8 All interpretations and decisions of the Architect shall be consistent with the intent of the Contract Documents. In his capacity as interpreter and judge, he will exercise his best efforts to insure faithful performance by both the Owner and the Contractor and will not show partiality to either.

2.2.9 The Architect's decisions in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents.

2.2.10 Any claim, dispute or other matter that has been referred to the Architect, except those relating to artistic effect as provided in Subparagraph 2.2.9 and except any which have been waived by the making or acceptance of final payment as provided in Subparagraphs 9.7.5 and 9.7.6, shall be subject to arbitration upon the written demand of either party. However, no demand for arbitration of any such claim, dispute or other matter may be made until the earlier of:

2.2.10.1 The date on which the Architect has rendered his written decision, or

.2 the tenth day after the parties have presented their evidence to the Architect or have been given a reasonable opportunity to do so, if the Architect has not rendered his written decision by that date.

2.2.11 If a decision of the Architect is made in writing and states that it is final but subject to appeal, no demand for arbitration of a claim, dispute or other matter covered by such decision may be made later than thirty days after the date on which the party making the demand received the decision. The failure to demand arbitration within said thirty days' period will result in the Architect's decision becoming final and binding upon the Owner and the Contractor. If the Architect renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but will not supersede any arbitration proceedings unless the decision is acceptable to the parties concerned.

2.2.12 The Architect will have authority to reject Work which does not conform to the Contract Documents. Whenever, in his reasonable opinion, he considers it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work in accordance with Subparagraph 7.8.2 whether or not such Work be then fabricated, installed or completed. However, neither the Architect's authority to act under this Subparagraph 2.2.12, nor any decision made by him in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Architect to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the Work.

2.2.13 The Architect will review Shop Drawings and Samples as provided in Subparagraphs 4.13.1 through 4.13.8 inclusive.

2.2.14 The Architect will prepare Change Orders in accordance with Article 12, and will have authority to order minor changes in the Work as provided in Subparagraph 12.3.1.

2.2.15 The Architect will conduct inspections to determine the dates of Substantial Completion and final completion, will receive and review written guarantees and related documents required by the Contract and assembled by the Contractor and will issue a final Certificate for Payment.

2.2.16 If the Owner and Architect agree, the Architect will provide one or more Full-Time Project Representatives to assist the Architect in carrying out his responsibilities at the site. The duties, responsibilities and limitations of authority of any such Project Representative shall be as set forth in an exhibit to be incorporated in the Contract Documents.

2.2.17 The duties, responsibilities and limitations of authority of the Architect as the Owner's representative during construction as set forth in Articles 1 through 14 inclusive of these General Conditions will not be modified or extended without written consent of the Owner, the Contractor and the Architect.

2.2.18 The Architect will not be responsible for the acts or omissions of the Contractor, any Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

2.2.19 In case of the termination of the employment of the Architect, the Owner shall appoint an architect against whom the Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former architect. Any dispute in connection with such appointment shall be subject to arbitration.

ARTICLE 3

OWNER

3.1 DEFINITION

3.1.1 The Owner is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner or his authorized representative.

3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

3.2.1 The Owner shall furnish all surveys describing the physical characteristics, legal limits and utility locations for the site of the Project.

3.2.2 The Owner shall secure and pay for easements for permanent structures or permanent changes in existing facilities.

3.2.3 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

3.2.4 The Owner shall issue all instructions to the Contractor through the Architect.

3.2.5 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Payment and Insurance in Articles 9 and 11 respectively.

3.3 OWNER'S RIGHT TO STOP THE WORK

3.3.1 If the Contractor fails to correct defective Work or persistently fails to supply materials or equipment in accordance with the Contract Documents, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.

3.4 OWNER'S RIGHT TO CARRY OUT THE WORK

3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, after seven days' written notice to the Contractor and without prejudice to any other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including the cost of the Architect's additional services made necessary by such default, neglect or failure. The Architect must approve both such action and the amount charged to the Contractor. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

ARTICLE 4

CONTRACTOR

4.1 DEFINITION

4.1.1 The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Architect any error, inconsistency or omission he may discover. The Contractor shall not be liable to the Owner or the Architect for any damage resulting from any such errors, inconsistencies or omissions in the Contract Documents. The Contractor shall do no Work without Drawings, Specifications or Modifications.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

4.4 LABOR AND MATERIALS

4.4.1 Unless otherwise specifically noted, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him.

4.5 WARRANTY

4.5.1 The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards may be considered defective. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

4.6 TAXES

4.6.1 The Contractor shall pay all sales, consumer, use and other similar taxes required by law.

4.7 PERMITS, FEES AND NOTICES

4.7.1 The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the Work, which are applicable at the time the bids are received. It is not the responsibility of the Contractor to make certain that the Drawings and Specifications are in accordance with applicable laws, statutes, building codes and regulations.

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the Work. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Architect in writing, and any necessary changes shall be adjusted by appropriate Modification. If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Architect, he shall assume full responsibility therefor and shall bear all costs attributable thereto.

4.8 CASH ALLOWANCES

4.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. These allowances shall cover the net cost of the materials and equipment delivered and unloaded at the site, and all applicable taxes. The Contractor's handling costs on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance. The Contractor shall cause the Work covered by these allowances to be performed for such amounts and by such persons as the Architect may direct, but he will not be required to employ persons against whom he makes a reasonable objection. If the cost, when determined, is more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order which will include additional handling costs on the site, labor, installation costs, overhead, profit and other expenses resulting to the Contractor from any increase over the original allowance.

4.9 SUPERINTENDENT

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during the progress of the Work. The superintendent shall be satisfactory to the Architect, and shall not be changed except with the consent of the Architect, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor. Important communications will be confirmed in writing. Other communications will be so confirmed on written request in each case.

4.10 RESPONSIBILITY FOR THOSE PERFORMING THE WORK

4.10.1 The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all Subcontractors, their agents and employees, and all other persons performing any of the Work under a contract with the Contractor.

4.11 PROGRESS SCHEDULE

4.11.1 The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Architect's approval an estimated progress schedule for the Work. The progress schedule shall be related to the entire Project to the extent required by the Contract Documents. This schedule shall indicate the dates for the starting and completion of the various stages of construction and shall be revised as required by the conditions of the Work, subject to the Architect's approval.

4.12 DRAWINGS AND SPECIFICATIONS AT THE SITE

4.12.1 The Contractor shall maintain at the site for the Owner one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications, in good order and marked to record all changes made during construction. These shall be available to the Architect. The Drawings, marked to record all changes made during construction, shall be delivered to him for the Owner upon completion of the Work.

4.13 SHOP DRAWINGS AND SAMPLES

4.13.1 Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the Work.

4.13.2 Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to establish standards by which the Work will be judged.

4.13.3 The Contractor shall review, stamp with his approval and submit, with reasonable promptness and in orderly sequence so as to cause no delay in the Work or in the work of any other contractor, all Shop Drawings and Samples required by the Contract Documents or subsequently by the Architect as covered by Modifications. Shop Drawings and Samples shall be properly identified as specified, or as the Architect may require. At the time of submission the Contractor shall inform the Architect in writing of any deviation in the Shop Drawings or Samples from the requirements of the Contract Documents.

4.13.4 By approving and submitting Shop Drawings and Samples, the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated each Shop Drawing and Sample with the requirements of the Work and of the Contract Documents.

4.13.5 The Architect will review and approve Shop Drawings and Samples with reasonable promptness so as to cause no delay, but only for conformance with the design concept of the Project and with the information given in the Contract Documents. The Architect's approval of a separate item shall not indicate approval of an assembly in which the item functions.

4.13.6 The Contractor shall make any corrections required by the Architect and shall resubmit the required number of corrected copies of Shop Drawings or new Samples until approved. The Contractor shall direct spe-

cific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections requested by the Architect on previous submissions.

4.13.7 The Architect's approval of Shop Drawings or Samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Architect in writing of such deviation at the time of submission and the Architect has given written approval to the specific deviation, nor shall the Architect's approval relieve the Contractor from responsibility for errors or omissions in the Shop Drawings or Samples.

4.13.8 No portion of the Work requiring a Shop Drawing or Sample submission shall be commenced until the submission has been approved by the Architect. All such portions of the Work shall be in accordance with approved Shop Drawings and Samples.

4.14 USE OF SITE

4.14.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

4.15 CUTTING AND PATCHING OF WORK

4.15.1 The Contractor shall do all cutting, fitting or patching of his Work that may be required to make its several parts fit together properly, and shall not endanger any Work by cutting, excavating or otherwise altering the Work or any part of it.

4.16 CLEANING UP

4.16.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he shall remove all his waste materials and rubbish from and about the Project as well as all his tools, construction equipment, machinery and surplus materials, and shall clean all glass surfaces and leave the Work "broom-clean" or its equivalent, except as otherwise specified.

4.16.2 If the Contractor fails to clean up, the Owner may do so and the cost thereof shall be charged to the Contractor as provided in Paragraph 3.4.

4.17 COMMUNICATIONS

4.17.1 The Contractor shall forward all communications to the Owner through the Architect.

4.18 INDEMNIFICATION

4.18.1 The Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

4.18.2 In any and all claims against the Owner or the Architect or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.18 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

4.18.3 The obligations of the Contractor under this Paragraph 4.18 shall not extend to the liability of the Architect, his agents or employees arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, his agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

ARTICLE 5

SUBCONTRACTORS

5.1 DEFINITION

5.1.1 A Subcontractor is a person or organization who has a direct contract with the Contractor to perform any of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative.

5.1.2 A Sub-subcontractor is a person or organization who has a direct or indirect contract with a Subcontractor to perform any of the Work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.

5.1.3 Nothing contained in the Contract Documents shall create any contractual relation between the Owner or the Architect and any Subcontractor or Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 Unless otherwise specified in the Contract Documents or in the Instructions to Bidders, the Contractor, as soon as practicable after the award of the Contract, shall furnish to the Architect in writing for acceptance by the Owner and the Architect a list of the names of the Subcontractors proposed for the principal portions of the Work. The Architect shall promptly notify the Contractor in writing if either the Owner or the Architect, after due investigation, has reasonable objection to any Subcontractor on such list and does not accept him. Failure of the Owner or Architect to make objection promptly to any Subcontractor on the list shall constitute acceptance of such Subcontractor.

5.2.2 The Contractor shall not contract with any Subcontractor or any person or organization (including those who are to furnish materials or equipment fabricated to a special design) proposed for portions of the Work designated in the Contract Documents or in the Instructions to Bidders or, if none is so designated, with any Subcontractor proposed for the principal portions of the Work who has been rejected by the Owner and the Architect. The Contractor will not be required to contract with any Subcontractor or person or organization against whom he has a reasonable objection.

5.2.3 If the Owner or Architect refuses to accept any Subcontractor or person or organization on a list submitted by the Contractor in response to the requirements of the Contract Documents or the Instructions to Bidders, the Contractor shall submit an acceptable substitute and the Contract Sum shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate Change Order shall be issued; however, no increase in the Contract Sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting for acceptance any list or lists of names as required by the Contract Documents or the Instructions to Bidders.

5.2.4 If the Owner or the Architect requires a change of any proposed Subcontractor or person or organization previously accepted by them, the Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued.

5.2.5 The Contractor shall not make any substitution for any Subcontractor or person or organization who has been accepted by the Owner and the Architect, unless the substitution is acceptable to the Owner and the Architect.

5.3 SUBCONTRACTUAL RELATIONS

5.3.1 All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor (and where appropriate between Subcontractors and Sub-subcontractors) which shall contain provisions that:

- **.1** preserve and protect the rights of the Owner and the Architect under the Contract with respect to the Work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;
- **.2** require that such Work be performed in accordance with the requirements of the Contract Documents;
- **.3** require submission to the Contractor of applications for payment under each subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with Article 9;
- **.4** require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted portions of the Work shall be submitted to the Contractor (via any Subcontractor or Sub-subcontractor where appropriate) in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the Contractor upon the Owner;
- **.5** waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance described in Paragraph 11.3, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee under Paragraph 11.3; and
- **.6** obligate each Subcontractor specifically to consent to the provisions of this Paragraph 5.3.

5.4 PAYMENTS TO SUBCONTRACTORS

5.4.1 The Contractor shall pay each Subcontractor, upon receipt of payment from the Owner, an amount equal to the percentage of completion allowed to the Contractor on account of such Subcontractor's Work, less the percentage retained from payments to the Contractor. The Contractor shall also require each Subcontractor to make similar payments to his subcontractors.

5.4.2 If the Architect fails to issue a Certificate for Payment for any cause which is the fault of the Contractor and not the fault of a particular Subcontractor, the Contractor shall pay that Subcontractor on demand, made at any time after the Certificate for Payment should otherwise have been issued, for his Work to the extent completed, less the retained percentage.

5.4.3 The Contractor shall pay each Subcontractor a just share of any insurance moneys received by the Contractor under Article 11, and he shall require each Subcontractor to make similar payments to his subcontractors.

5.4.4 The Architect may, on request and at his discretion, furnish to any Subcontractor, if practicable, information regarding percentages of completion certified to the Contractor on account of Work done by such Subcontractors.

5.4.5 Neither the Owner nor the Architect shall have any obligation to pay or to see to the payment of any moneys to any Subcontractor except as may otherwise be required by law.

ARTICLE 6

SEPARATE CONTRACTS

6.1 OWNER'S RIGHT TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to award other contracts in connection with other portions of the Project under these or similar Conditions of the Contract.

6.1.2 When separate contracts are awarded for different portions of the Project, "the Contractor" in the contract documents in each case shall be the contractor who signs each separate contract.

6.2 MUTUAL RESPONSIBILITY OF CONTRACTORS

6.2.1 The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their

work, and shall properly connect and coordinate his Work with theirs.

6.2.2 If any part of the Contractor's Work depends for proper execution or results upon the work of any other separate contractor, the Contractor shall inspect and promptly report to the Architect any apparent discrepancies or defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor so to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper to receive his Work, except as to defects which may develop in the other separate contractor's work after the execution of the Contractor's Work.

6.2.3 Should the Contractor cause damage to the work or property of any separate contractor on the Project, the Contractor shall, upon due notice, settle with such other contractor by agreement or arbitration, if he will so settle. If such separate contractor sues the Owner or initiates an arbitration proceeding on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor who shall defend such proceedings at the Owner's expense, and if any judgment or award against the Owner arises therefrom the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys' fees and court or arbitration costs which the Owner has incurred.

6.3 CUTTING AND PATCHING UNDER SEPARATE CONTRACTS

6.3.1 The Contractor shall be responsible for any cutting, fitting and patching that may be required to complete his Work except as otherwise specifically provided in the Contract Documents. The Contractor shall not endanger any work of any other contractors by cutting, excavating or otherwise altering any work and shall not cut or alter the work of any other contractor except with the written consent of the Architect.

6.3.2 Any costs caused by defective or ill-timed work shall be borne by the party responsible therefor.

6.4 OWNER'S RIGHT TO CLEAN UP

6.4.1 If a dispute arises between the separate contractors as to their responsibility for cleaning up as required by Paragraph 4.16, the Owner may clean up and charge the cost thereof to the several contractors as the Architect shall determine to be just.

ARTICLE 7

MISCELLANEOUS PROVISIONS

7.1 GOVERNING LAW

7.1.1 The Contract shall be governed by the law of the place where the Project is located.

7.2 SUCCESSORS AND ASSIGNS

7.2.1 The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the previous written consent of the Owner.

7.3 WRITTEN NOTICE

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

7.4 CLAIMS FOR DAMAGES

7.4.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or of any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

7.5 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

7.5.1 The Owner shall have the right to require the Contractor to furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder if and as required in the Instructions to Bidders or elsewhere in the Contract Documents.

7.6 RIGHTS AND REMEDIES

7.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

7.7 ROYALTIES AND PATENTS

7.7.1 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Architect.

7.8 TESTS

7.8.1 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to be inspected, tested or approved, the Contractor shall give the Architect timely notice of its readiness and of the date arranged so the Architect may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests and approvals unless otherwise provided.

7.8.2 If after the commencement of the Work the Architect determines that any Work requires special inspection, testing, or approval which Subparagraph 7.8.1

does not include, he will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as in Subparagraph 7.8.1. If such special inspection or testing reveals a failure of the Work to comply (1) with the requirements of the Contract Documents or (2), with respect to the performance of the Work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, the Contractor shall bear all costs thereof, including the Architect's additional services made necessary by such failure; otherwise the Owner shall bear such costs, and an appropriate Change Order shall be issued.

7.8.3 Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered by him to the Architect.

7.8.4 If the Architect wishes to observe the inspections, tests or approvals required by this Paragraph 7.8, he will do so promptly and, where practicable, at the source of supply.

7.8.5 Neither the observations of the Architect in his Administration of the Construction Contract, nor inspections, tests or approvals by persons other than the Contractor shall relieve the Contractor from his obligations to perform the Work in accordance with the Contract Documents.

7.9 INTEREST

7.9.1 Any moneys not paid when due to either party under this Contract shall bear interest at the legal rate in force at the place of the Project.

7.10 ARBITRATION

7.10.1 All claims, disputes and other matters in question arising out of, or relating to, this Contract or the breach thereof, except as set forth in Subparagraph 2.2.9 with respect to the Architect's decisions on matters relating to artistic effect, and except for claims which have been waived by the making or acceptance of final payment as provided by Subparagraphs 9.7.5 and 9.7.6, shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining unless the parties mutually agree otherwise. This agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

7.10.2 Notice of the demand for arbitration shall be filed in writing with the other party to the Contract and with the American Arbitration Association, and a copy shall be filed with the Architect. The demand for arbitration shall be made within the time limits specified in Subparagraphs 2.2.10 and 2.2.11 where applicable, and in all other cases within a reasonable time after the claim, dispute or other matter in question has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.

7.10.3 The Contractor shall carry on the Work and maintain the progress schedule during any arbitration proceedings, unless otherwise agreed by him and the Owner in writing.

ARTICLE 8

TIME

8.1 DEFINITIONS

8.1.1 The Contract Time is the period of time allotted in the Contract Documents for completion of the Work.

8.1.2 The date of commencement of the Work is the date established in a notice to proceed. If there is no notice to proceed, it shall be the date of the Agreement or such other date as may be established therein.

8.1.3 The Date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Architect when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner may occupy the Work or designated portion thereof for the use for which it is intended.

8.1.4 The term day as used in the Contract Documents shall mean calendar day.

8.2 PROGRESS AND COMPLETION

8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract

8.2.2 The Contractor shall begin the Work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the Work forward expeditiously with adequate forces and shall complete it within the Contract Time.

8.2.3 If a date or time of completion is included in the Contract, it shall be the Date of Substantial Completion as defined in Subparagraph 8.1.3, including authorized extensions thereto, unless otherwise provided.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 If the Contractor is delayed at any time in the progress of the Work by any act or neglect of the Owner or the Architect, or by any employee of either, or by any separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in transportation, unavoidable casualties or any causes beyond the Contractor's control, or by delay authorized by the Owner pending arbitration, or by any cause which the Architect determines may justify the delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

8.3.2 All claims for extension of time shall be made in writing to the Architect no more than twenty days after the occurrence of the delay; otherwise they shall be waived. In the case of a continuing cause of delay only one claim is necessary.

8.3.3 If no schedule or agreement is made stating the dates upon which written interpretations as set forth in Subparagraph 1.2.5 shall be furnished, then no claim for delay shall be allowed on account of failure to furnish

such interpretations until fifteen days after demand is made for them, and not then unless such claim is reasonable.

8.3.4 This Paragraph 8.3 does not exclude the recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and is the total amount payable by the Owner to the Contractor for the performance of the Work under the Contract Documents.

9.2 SCHEDULE OF VALUES

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values of the various portions of the Work, including quantities if required by the Architect, aggregating the total Contract Sum, divided so as to facilitate payments to Subcontractors in accordance with Paragraph 5.4, prepared in such form as specified or as the Architect and the Contractor may agree upon, and supported by such data to substantiate its correctness as the Architect may require. Each item in the schedule of values shall include its proper share of overhead and profit. This schedule, when approved by the Architect, shall be used only as a basis for the Contractor's Applications for Payment.

9.3 PROGRESS PAYMENTS

9.3.1 At least ten days before each progress payment falls due, the Contractor shall submit to the Architect an itemized Application for Payment, supported by such data substantiating the Contractor's right to payment as the Owner or the Architect may require.

9.3.2 If payments are to be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site, or at some other location agreed upon in writing, such payments shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest including applicable insurance and transportation to the site.

9.3.3 The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an Application for Payment, whether incorporated in the Project or not, will pass to the Owner upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 9 as "liens"; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor; or by any other person performing the Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

9.4 CERTIFICATES FOR PAYMENT

9.4.1 If the Contractor has made Application for Payment as above, the Architect will, with reasonable promptness but not more than seven days after the receipt of the Application, issue a Certificate for Payment to the Owner, with a copy to the Contractor, for such amount as he determines to be properly due, or state in writing his reasons for withholding a Certificate as provided in Subparagraph 9.5.1.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on his observations at the site as provided in Subparagraph 2.2.4 and the data comprising the Application for Payment, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and to any specific qualifications stated in his Certificate); and that the Contractor is entitled to payment in the amount certified. In addition, the Architect's final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.7.2 have been fulfilled. However, by issuing a Certificate for Payment, the Architect shall not thereby be deemed to represent that he has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work or that he has reviewed the construction means, methods, techniques, sequences or procedures, or that he has made any examination to ascertain how or for what purpose the Contractor has used the moneys previously paid on account of the Contract Sum.

9.4.3 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner provided in the Agreement.

9.4.4 No certificate for a progress payment, nor any progress payment, nor any partial or entire use or occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

9.5 PAYMENTS WITHHELD

9.5.1 The Architect may decline to approve an Application for Payment and may withhold his Certificate in whole or in part, to the extent necessary reasonably to protect the Owner, if in his opinion he is unable to make representations to the Owner as provided in Subparagraph 9.4.2. The Architect may also decline to approve any Applications for Payment or, because of subsequently discovered evidence or subsequent inspections, he may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary in his opinion to protect the Owner from loss because of:

.1 defective work not remedied,

.2 third party claims filed or reasonable evidence indicating probable filing of such claims,

.3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment,
.4 reasonable doubt that the Work can be completed for the unpaid balance of the Contract Sum,
.5 damage to another contractor,
.6 reasonable indication that the Work will not be completed within the Contract Time, or
.7 unsatisfactory prosecution of the Work by the Contractor.

9.5.2 When the above grounds in Subparagraph 9.5.1 are removed, payment shall be made for amounts withheld because of them.

9.6 FAILURE OF PAYMENT

9.6.1 If the Architect should fail to issue any Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner should fail to pay the Contractor within seven days after the date of payment established in the Agreement any amount certified by the Architect or awarded by arbitration, then the Contractor may, upon seven additional days' written notice to the Owner and the Architect, stop the Work until payment of the amount owing has been received.

9.7 SUBSTANTIAL COMPLETION AND FINAL PAYMENT

9.7.1 When the Contractor determines that the Work or a designated portion thereof acceptable to the Owner is substantially complete, the Contractor shall prepare for submission to the Architect a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Architect on the basis of an inspection determines that the Work is substantially complete, he will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for maintenance, heat, utilities, and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. The Certificate of Substantial Completion shall be submitted to the Owner and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

9.7.2 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when he finds the Work acceptable under the Contract Documents and the Contract fully performed, he will promptly issue a final Certificate for Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable.

9.7.3 Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Architect (1) an Affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety, if any, to final payment and (3), if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

9.7.4 If after Substantial Completion of the Work final completion thereof is materially delayed through no fault of the Contractor, and the Architect so confirms, the Owner shall, upon certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Subparagraph 7.5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

9.7.5 The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:

.1 unsettled liens,
.2 faulty or defective Work appearing after Substantial Completion,
.3 failure of the Work to comply with the requirements of the Contract Documents, or
.4 terms of any special guarantees required by the Contract Documents.

9.7.6 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and still unsettled.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

.1 all employees on the Work and all other persons who may be affected thereby;

.2 all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and

.3 other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

10.2.3 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

10.2.4 All damage or loss to any property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, any Subcontractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the Contractor, except damage or loss attributable to faulty Drawings or Specifications or to the acts or omissions of the Owner or Architect or anyone employed by either of them or for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor.

10.2.5 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner and the Architect.

10.2.6 The Contractor shall not load or permit any part of the Work to be loaded so as to endanger its safety.

10.3 EMERGENCIES

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 12 for Changes in the Work.

ARTICLE 11

INSURANCE

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 The Contractor shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by himself or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 claims under workmen's compensation, disability benefit and other similar employee benefit acts;

.2 claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

.3 claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

.4 claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person; and

.5 claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than any limits of liability specified in the Contract Documents, or required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under Paragraph 4.18.

11.1.3 Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These Certificates shall contain a provision that coverages afforded under the policies will not be cancelled until at least fifteen days' prior written notice has been given to the Owner.

11.2 OWNER'S LIABILITY INSURANCE

11.2.1 The Owner shall be responsible for purchasing and maintaining his own liability insurance and, at his option, may purchase and maintain such insurance as will protect him against claims which may arise from operations under the Contract.

11.3 PROPERTY INSURANCE

11.3.1 Unless otherwise provided, the Owner shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work and shall insure against the perils of Fire, Extended Coverage, Vandalism and Malicious Mischief.

11.3.2 The Owner shall purchase and maintain such steam boiler and machinery insurance as may be required by the Contract Documents or by law. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

11.3.3 Any insured loss is to be adjusted with the Owner and made payable to the Owner as trustee for the insureds, as their interests may appear, subject to the requirements of any applicable mortgagee clause and of Subparagraph 11.3.8.

11.3.4 The Owner shall file a copy of all policies with the Contractor before an exposure to loss may occur. If the Owner does not intend to purchase such insurance, he shall inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance which will protect the interests of himself, his Subcontractors and the Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by failure of the Owner to purchase or maintain such insurance and so to notify the Contractor, then the Owner shall bear all reasonable costs properly attributable thereto.

11.3.5 If the Contractor requests in writing that insurance for special hazards be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

11.3.6 The Owner and Contractor waive all rights against each other for damages caused by fire or other perils to the extent covered by insurance provided under this Paragraph 11.3, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee. The Contractor shall require similar waivers by Subcontractors and Sub-subcontractors in accordance with Clause 5.3.1.5.

11.3.7 If required in writing by any party in interest, the Owner as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of his duties. He shall deposit in a separate account any money so received, and he shall distribute it in accordance with such agreement as the parties in interest may reach, or in accordance with an award by arbitration in which case the procedure shall be as provided in Paragraph 7.10. If after such loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate Change Order.

11.3.8 The Owner as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within five days after the occurrence of loss to the Owner's exercise of this power, and if such objection be made, arbitrators shall be chosen as provided in Paragraph 7.10. The Owner as trustee shall, in that case, make settlement with the insurers in accordance with the directions of such arbitrators. If distribution of the insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

11.4 LOSS OF USE INSURANCE

11.4.1 The Owner, at his option, may purchase and maintain such insurance as will insure him against loss of use of his property due to fire or other hazards, however caused.

ARTICLE 12

CHANGES IN THE WORK

12.1 CHANGE ORDERS

12.1.1 The Owner, without invalidating the Contract, may order Changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such Changes in the Work shall be authorized by Change Order, and shall be executed under the applicable conditions of the Contract Documents.

12.1.2 A Change Order is a written order to the Contractor signed by the Owner and the Architect, issued after the execution of the Contract, authorizing a Change in the Work or an adjustment in the Contract Sum or the Contract Time. Alternatively, the Change Order may be signed by the Architect alone, provided he has written authority from the Owner for such procedure and that a copy of such written authority is furnished to the Contractor upon request. A Change Order may also be signed by the Contractor if he agrees to the adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order.

12.1.3 The cost or credit to the Owner resulting from a Change in the Work shall be determined in one or more of the following ways:

- **.1** by mutual acceptance of a lump sum properly itemized;
- **.2** by unit prices stated in the Contract Documents or subsequently agreed upon; or
- **.3** by cost and a mutually acceptable fixed or percentage fee.

12.1.4 If none of the methods set forth in Subparagraph 12.1.3 is agreed upon, the Contractor, provided he receives a Change Order, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Architect on the basis of the Contractor's reasonable expenditures and savings, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Clause 12.1.3.3 above, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Pending final determination of cost to the Owner, payments on account shall be made on the Architect's Certificate for Payment. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in cost will be the amount of the actual net decrease as confirmed by the Architect. When both additions and credits are involved in any one change, the allowance for overhead and profit shall be figured on the basis of net increase, if any.

12.1.5 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if the quantities originally contemplated are so changed in a proposed Change Order that application of the agreed unit prices to the quantities of Work proposed will create a hardship on the Owner or the Contractor, the applicable unit prices shall be equitably adjusted to prevent such hardship.

12.1.6 Should concealed conditions encountered in the performance of the Work below the surface of the ground be at variance with the conditions indicated by the Contract Documents or should unknown physical conditions below the surface of the ground of an unusual nature,

differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be encountered, the Contract Sum shall be equitably adjusted by Change Order upon claim by either party made within twenty days after the first observance of the conditions.

12.1.7 If the Contractor claims that additional cost is involved because of (1) any written interpretation issued pursuant to Subparagraph 1.2.5, (2) any order by the Owner to stop the Work pursuant to Paragraph 3.3 where the Contractor was not at fault, or (3) any written order for a minor change in the Work issued pursuant to Paragraph 12.3, the Contractor shall make such claim as provided in Paragraph 12.2.

12.2 CLAIMS FOR ADDITIONAL COST

12.2.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the Architect written notice thereof within twenty days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Subparagraph 10.3.1. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the Architect. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

12.3 MINOR CHANGES IN THE WORK

12.3.1 The Architect shall have authority to order minor changes in the Work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes may be effected by Field Order or by other written order. Such changes shall be binding on the Owner and the Contractor.

12.4 FIELD ORDERS

12.4.1 The Architect may issue written Field Orders which interpret the Contract Documents in accordance with Subparagraph 1.2.5 or which order minor changes in the Work in accordance with Paragraph 12.3 without change in Contract Sum or Contract Time. The Contractor shall carry out such Field Orders promptly.

ARTICLE 13

UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 If any Work should be covered contrary to the request of the Architect, it must, if required by the Architect, be uncovered for his observation and replaced, at the Contractor's expense.

13.1.2 If any other Work has been covered which the Architect has not specifically requested to observe prior to being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it be found that this condition was caused by a separate contractor employed as provided in Article 6, and in that event the Owner shall be responsible for the payment of such costs.

13.2 CORRECTION OF WORK

13.2.1 The Contractor shall promptly correct all Work rejected by the Architect as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all cost of correcting such rejected Work, including the cost of the Architect's additional services thereby made necessary.

13.2.2 If, within one year after the Date of Substantial Completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 All such defective or non-conforming Work under Subparagraphs 13.2.1 and 13.2.2 shall be removed from the site if necessary, and the Work shall be corrected to comply with the Contract Documents without cost to the Owner.

13.2.4 The Contractor shall bear the cost of making good all work of separate contractors destroyed or damaged by such removal or correction.

13.2.5 If the Contractor does not remove such defective or non-conforming Work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner may upon ten additional days' written notice sell such Work at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor including compensation for additional architectural services. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.6 If the Contractor fails to correct such defective or non-conforming Work, the Owner may correct it in accordance with Paragraph 3.4.

13.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

13.3.1 If the Owner prefers to accept defective or non-conforming Work, he may do so instead of requiring its

removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the Contract Sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

ARTICLE 14

TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 If the Work is stopped for a period of thirty days under an order of any court or other public authority having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the Work under a contract with the Contractor, or if the Work should be stopped for a period of thirty days by the Contractor for the Architect's failure to issue a Certificate for Payment as provided in Paragraph 9.6 or for the Owner's failure to make payment thereon as provided in Paragraph 9.6, then the Contractor may, upon seven days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for all Work executed and for any proven loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and damages.

14.2 TERMINATION BY THE OWNER

14.2.1 If the Contractor is adjudged a bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or if he persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, then the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may, without prejudice to any right or remedy and after giving the Contractor and his surety, if any, seven days' written notice, terminate the employment of the Contractor and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished.

14.2.2 If the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, including compensation for the Architect's additional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the Owner. The costs incurred by the Owner as herein provided shall be certified by the Architect.